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Massasterfte onder Visse
Trypsin in Paediatrics

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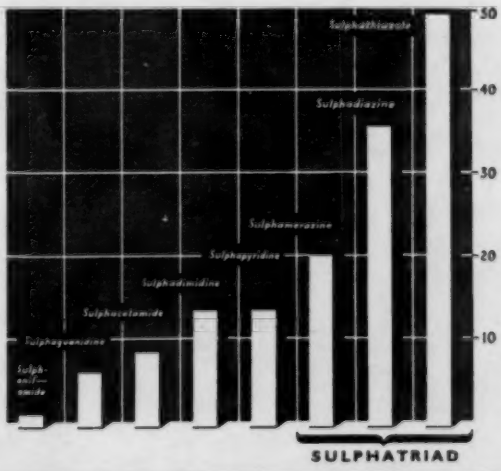
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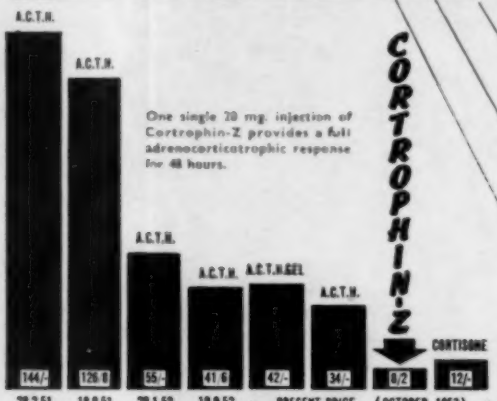
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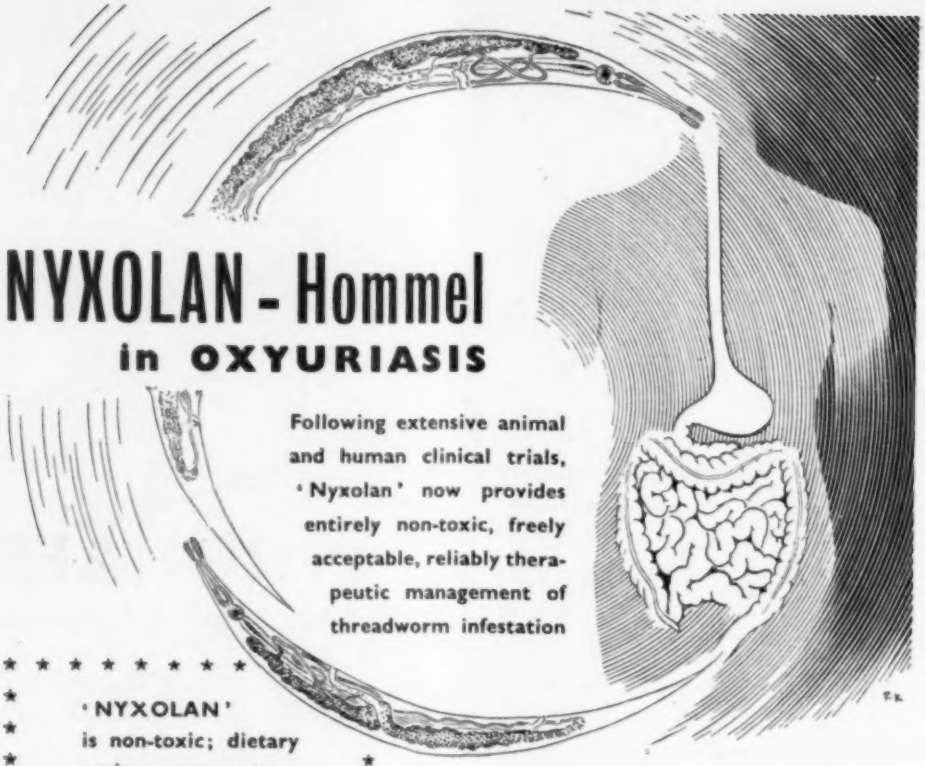
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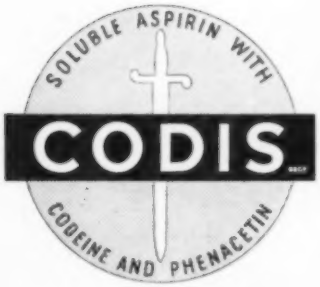
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1. Valentine, F. C. O.: *LANCET* **1**:351 (AUG. 23) 1952.
2. Reiss, F.: *NEW YORK STATE J. MED.* **52**:1031 (APR. 15) 1952.

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REDAKSIE

MASSASTERFTE ONDER VISSE

Dit is waarskynlik nie alombekend nie dat daar byna elke jaar, gewoonlik gedurende die maande Desember en Januarie, 'n massasterfte onder die vis in die Walvisbaai-omgewing van Suidwes-Afrika geskied. Visse en ander vorms van marinelewe word in die see en langs die strand gevind—dood of aan dood gaan. Somtyds is daar duisende ton dooie vis, op ander tye kleiner hoeveelhede. Hierdie verskynsel is vir meer as 100 jaar al welbekend en is deur verskeie navorsers ondersoek, onder ander deur W. J. Copenhagen van Kaapstad wat onlangs sy bevindings i.v.m. hierdie vraagstuk in 'n artikel [1] beskrywe het waarvan 'n opsomming in hierdie uitgawe (bl. 00) verskyn.

'n Uiters opmerklike verskynsel in die Walvisbaai-streek is die plotselinge verskyning en verdwyning van slikeilande wat gepaard gaan met 'n swawelwaterstofruik. In streke langs die Walvisbaaikus is die atmosfeer dwarsdeur die jaar met hierdie gas besmet wat met tye sterk genoeg is om loodverfstowwe en kopertoebehore van skepe op see of geboue aan land te verkleur. 'n Groot gebied van die seebodem bestaan uit groen, slegreukende slik wat swawelwaterstof afgee. Die gebied strek vir ongeveer 6,000 vierkantmyl sonder enige bodemvislewe en word derhalwe die asoiëse streek van die Weskus genoem. Oppervlaktevis, byv. sardyn en marsbanker, word egter in groot hoeveelhede in die oppervlaktewater van hierdie streek aangetref. Hul word voorsien van kos wat saamgevoer word deur die koue Benguela-stroom wat noordwaarts oor die asoiëse streek vloei. Tydens massasterfte dui 'n inhoudsmeting van die opgeloste suurstofinhoud van hierdie streek se water 'n gestadige suurstofvermindering van oppervlakte tot seebodem aan. Daar bestaan oënskynlik 'n korrelasie tussen sekere meteorologiese en oseanografiese omstandighede en die verskyning van die dooie vis. Wanneer sekere toestande ontstaan raak die opgeloste suurstof op, anerobiesagtige sulfaat-reduserende mikro-organismes floreer en swawelwaterstof word afgegee en gevolglik sak die suurstofinhoud nog laer. Onder sekere kondisies word hierdie bodemwater van die seevloer na die oppervlaktewaters forseer en word die oppervlaktevis daarin gedood. Die

EDITORIAL

MASS MORTALITY OF FISH

It is probably not known to many people that almost every year a mass mortality of fish occurs in the Walvis Bay region, South West Africa, usually during the months of December and January. Dead and dying fish and other forms of marine life are to be found in the sea or on the beaches. At times thousands of tons of dead fish have been observed; at other times smaller numbers. The phenomenon has been known for well over a hundred years, and various investigations of it have been made, including those by W. J. Copenhagen, of Cape Town, who has recently described the results of his researches into this problem in an article [1] of which a summary is published in this issue (p. 00).

A most remarkable phenomenon in the Walvis region is the sudden appearance and disappearance of mud islands associated with the odour of sulphuretted hydrogen. Throughout the year in parts at or off the coast of Walvis Bay, the atmosphere is polluted with this gas, which at times is sufficient to cause darkening of lead paints and brass fittings on ships at sea or in buildings ashore. The sea bottom over a large area consists of green foul-smelling mud from which sulphuretted hydrogen evolves. The area is some 6,000 square miles, devoid of bottom-fish life, and for this reason called the azoic zone of the West Coast. Surface fish, however, e.g. pilchard and maasbanker, are present in considerable quantities in the water above, being supplied with food brought by the cold Benguela current flowing northward over the axoic zone. Measurements of the dissolved-oxygen content in water of these regions at times when mass mortality occurs indicate a steady diminution of oxygen from the surface down to the sea bed. There is apparently a correlation between certain meteorological and oceanographical conditions and the appearance of dead fish. Once certain conditions are established dissolved oxygen becomes depleted, anaerobic sulphate-reducing micro-organisms flourish and sulphuretted hydrogen is produced; this causes further depletion of oxygen. Under certain conditions

belangrikheid van swawel in die seewater, die veranderings wat dit ondergaan en die rol wat dit speel in die sterfte van vis in die Walvisbaaistreek word deur Copenhagen bespreek.

Die aanwesigheid van giftige plankton word in onlangse jare as 'n ander vername oorsaak van hierdie sterfte beskou. Die massa-produksie of aankoms onder sekere toestande van dinoflagellata, wat sterk neurotoksiene bevat, vernietig al die vis in die omtrek. Copenhagen gee 'n oorsig hiervan in sy artikel. Dit is wetenswaardig dat die gif wat op sekere tye in skulpvis, byvoorbeeld mossels, aanwesig is, toegeskryf is aan dinoflagellata wat deur die skulpvis opgeneem word. Hierdie mosselgif is 'n uiters kragtige stof,[2] waarvan die chemiese bestanddele en oorsprong nog bepaal moet word. Die giftige mossels kan alleenlik deur diere-toetse van die gewone mossels onderskei word. Dit sou van belang wees om vas te stel of die dooie vis van die Walvisbaaistreek neurotoksiene bevat wat van dinoflagellata afkomstig is.

Dit is egter nog nie duidelik nie of die massasterfte onder die vis aan 'n suurstof-tekort, òf aan 'n suurstoftekort plus swawelwaterstofvergiftiging òf aan giftige plankton, òf aan 'n samewerking van hierdie faktore te wyte is.

VERWYSINGS

1. Copenhagen, W. J. (1953): The Periodic Mortality of Fish in the Walvis Region. Pretoria: Division of Fisheries Investigational Report No. 14.
2. Sapeika, N. (1953): Arch. Int. Pharmacodyn, **93**, 135.

this bottom water invades the more superficial layers of the ocean, even reaching to the surface, and the fish which are engulfed in it are killed. The importance of sulphur in the sea water, the changes it undergoes, and its role in the mortality of fish in the Walvis region is discussed by Copenhagen.

Among other causes of the mortality the occurrence of poisonous plankton has been given prominence in recent years. Under certain conditions mass production or arrival of dinoflagellates containing powerful neurotoxins causes all fish in the vicinity to be destroyed. The subject is reviewed in Copenhagen's article. It is of interest that the poison present in shell-fish, e.g. mussels, at certain times has been attributed to dinoflagellates they have ingested. This mussel poison is an extremely potent substance.[2] Its chemical nature and original source have still to be determined. The poisonous mussels are indistinguishable from normal ones except by animal tests. It would be of interest to determine whether the dead fish of the Walvis region contain neurotoxin derived from the dinoflagellates.

It remains uncertain whether the mass mortality of fish is due to lack of oxygen, or lack of oxygen plus sulphuretted hydrogen poisoning, or poisonous plankton, or a combination of these factors.

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2. Sapeika, N. (1953): Arch. Int. Pharmacodyn, **93**, 135.

TRYPSIN IN PAEDIATRICS

Much interest has been shown in recent years in the investigation of the digestive enzymes in children. Many difficulties are encountered in such studies, such as the technical difficulty of obtaining specimens, the small quantities present in the resting condition, the variability of the secretory pattern even in the same individual, and the difficulty in obtaining pure secretions.

The crystallization of trypsin was announced in 1931,[1] and some years later the inactive precursor trypsinogen was isolated by the same workers. Since 1951 commercial preparations of crystalline trypsin have been available for clinical use. The composition of this enzyme is that of a typical protein. Its maximum stability is found to be at pH 7.5, and its optimum activity at pH 8. The enzyme can hydrolyze many types of protein but it has apparently more specific action on denatured proteins.

Oxidation-reduction is important in the control of its activity; thus reducing agents such as active thiosulphydryl compounds (e.g. cysteine, HS glutathione), ascorbic acid and sodium cyanide strongly antagonize the activity of trypsin and many other substances suppress its activity to a varying degree (e.g. serum, plasma, heavy metals, dyes, egg albumin). Several trypsin inhibitors have been isolated in crystalline forms, e.g. a polypeptide from pancreatic extracts[2] and a crystalline protein from soya bean,[3] and non-crystalline substances have also been studied.

There are certain problems in the field of paediatrics which may be related to this proteolytic enzyme. Thus anoxia of the newborn and distension of the infant's stomach from swallowed air may inhibit pancreatic activity and the output of trypsin in the early months of life. It has also been found that the composition of the pancreatic enzymes is adapted to the main constituent of the diet, so that with a high-protein diet there is an increased output of trypsin. Trypsin causes coagulations of casein, but it has been shown that it digests the casein so readily and rapidly that the coagulation of milk by trypsin is rather poor unless special conditions are arranged; e.g. when low concentrations of the casein substrates are used, or when proteolysis is slowed down by making the medium acid. Judging from certain investigations on antitryptic factors obtained from certain raw foods [4, 5] the presence of growth-inhibiting factors may be important in a child's diet. It is clear from these few statements that much remains to be done in the study of the digestive secretions in infancy and childhood, as indicated by studies of the role of trypsin in the physiology of the child.

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THE CONSERVATION OF HEARING IN CHRONIC SUPPURATIVE OTITIS MEDIA

F. BEKKER, F.R.C.S.E.

Conradie Hospital, Pinelands

With few exceptions, patients suffering from a chronic discharge from the middle ear are liable to deafness sooner or later. Our well-directed efforts to get a 'dry ear' are commendable in the early stages of the disease, but there is very little merit in drying up a discharge only to find that as an organ of hearing the ear is practically useless. In the later stages of the trouble the continued and repeated exhibition of drops is nothing less than an admission of failure to stem the inevitable progress to incapacitating deafness.

Before the introduction of a precision instrument to measure accurately the acuity of hearing at varying pitches and intensities, the assessment of deafness was a laborious and difficult proceeding, of real value only when performed in clinics with special facilities available. Outside these it was mostly guess-work. And although the mechanics of the transmission mechanism was understood, the physiological function of the ossicular chain was not so clear. It was assumed that an intact chain of ossicles was indispensible for practical and useful hearing and that only in the gravest emergencies was their removal permissible. Before a radical mastoidectomy was contemplated the patient had to be warned that he would in all probability be quite deaf in the ear as 'all the little bones will have to be removed'. And from this misconception of their function has come down to us the fear of loss of useful hearing if the conduction apparatus is interfered with in any way. No greater fallacy exists, as the fenestration operation has clearly shown. The fixation of the stapes in the oval window in otosclerosis typifies the ultimate in complete failure of the conduction mechanism. No impulse falling on the drum can reach the inner ear, and the patient is completely deaf for any air-conducted sound wave. Lempert's fenestration operation restores hearing in these patients to a 'useful and serviceable level', not by reconstituting the chain, which in fact is totally disrupted. There is therefore no doubt as to the ability to hear without the presence of a conduction mechanism of ossicles.

The middle ear is specifically designed to accommodate the ossicular chain and for the regulation of the atmospheric pressure in the chamber. It is lined by a very thin mucous membrane, which is reflected from its walls to enclose the ossicles, muscles and nerve, which are consequently very often involved in any bacterial invasion of the membrane. It responds to this invasion by becoming oedematous and thickened and by the effusion of fluid into the chamber. Both these factors impair the mobility of the transmission mechanism and are the cause of deafness in the early stage of an otitis media. If resolution does not occur, owing to ulceration of the membrane or necrosis of bone, organization of the exudates into fibrous tissue takes place, eventually binding the contents of the chamber into a tough, immovable mass, through which a sinus conveys pus to the hole in the drum. In this condition it is futile to pour drops into the ear.

The deafness in the early stage of the attack can be explained by the interference with the movements of the ossicles and drum, mostly by swelling and oedema. The impairment is seldom extreme and if it is, as sometimes happens, we must seek for the reason elsewhere than in dysfunction of the transmission mechanism only. The integrity of the membrane of the round window is as essential for perfect hearing as is the mechanical perfection of the ossicular chain. In the acute phase this membrane is probably also involved in the general inflammatory reaction of the chamber, and part of the deafness is due to impairment of its function. It lies in a niche in the inner wall of the middle ear where the inflammatory exudate can easily accumulate, and if organization takes place the window can become obliterated by a mass of fibrous tissue. A severe degree of deafness is the result.

To sum up, deafness in the early stages of an acute otitis media is due to swelling of the mucous membrane and the inflammatory effusion, impeding the free movement of the ossicles. If resolution does not occur, the organization of the inflammatory products may lead not only to further impairment of their movements but to the stapes becoming firmly fixed in the oval window and the movement of the round-window membrane being impeded. Toxins passing through the round window may contribute by injuring the cochlea and the end-picture is one of complete nerve deafness as well as conductive deafness.

From what we have learned from the fenestration operation, we know that beyond a more or less established and confirmed decibel loss of hearing, due to the extirpation of the transmission mechanism, any further loss is mainly due to obliteration of the functions of the oval and round windows. When a certain degree of deafness has ensued as the result of an infective process in the middle ear, the presence of the components of the transmission mechanism is of no value at all and they should be regarded as a dangerous source of infection, keeping alive the process which in the end will cause deafness of a very severe degree.

Our duty is clear. As soon as we suspect that our efforts to resolve an otitis media are going to be of no avail, we must learn, from repeated and accurate audiometric examinations, to interpret the pathological picture behind the drum in terms of deafness. And when we are convinced that the deafness has advanced to the stage where the drum and ossicles can be of no further use in hearing the middle ear should be 'cleaned out'

as thoroughly as it is possible to do. Excellent hearing has been retained after radical mastoidectomies when operation has not been delayed too long. In the dry adhesive type, with marked deafness, the fenestration operation is clearly indicated. Even in radicals with marked deafness, where bone conduction is still excellent there does not appear to be any reason why a fenestration should not be done.

Grave deafness is a terrible affliction and no measure which holds out the hope of preserving what hearing still remains or restoring to some degree what is lost, should be neglected.

FORENSIC PSYCHIATRY AT WESKOPPIES HOSPITAL

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In recent years psychiatric defence in criminal proceedings has become commonplace. Under Chapter 2 of the Mental Disorders Act (Act No. 38 of 1916 as amended by Act No. 7 of 1944) provision is made for the observation of accused persons in mental hospitals should there be doubt as to their being mentally disordered or defective. South Africa is the only country in which this special provision is made[1].

In the mental hospital the accused person's mental condition is thrown into relief against a background of mental disorder, amongst the ordinary run of certifiable mental illness. There are advantages and disadvantages in this procedure. The housing of individuals facing criminal charges together with ordinary mentally ill patients tends to emphasize the custodial aspect of the mental hospital, which, of course, is undesirable. Nevertheless the psychiatrist is afforded an opportunity of observing the accused person's behaviour, with the aid of psychiatrically trained nursing staff, for 24 hours of the day. Under these conditions any attempt to evade criminal responsibility by simulation of mental disorder is fraught with extreme difficulty.

We have studied the records of 295 male cases who, during the 3-year period 1951-53, were admitted to this hospital specifically to be observed to determine whether they were mentally disordered or defective or not. One of us (A. McE. L.) has personal knowledge of most of the cases.

TABLE I.—MALE EUROPEAN AND MALE BANTU MENTAL OBSERVATION CASES AT WESKOPPIES HOSPITAL DURING THREE YEARS 1951-53,

TABULATED ACCORDING TO CRIME

Crime	*Europeans*		*Bantu*	
	Number	*%*	*Number*	*%*
Theft	37	27	41	26
Murder	11	8	26	16
Assault	10	7	35	22
Sex Crimes	15	11	12	7.6
Fraud	6	4.4	—	—
Libel	1	0.7	—	—
Minor Offences	50	37	39	25
Referred from Penal Institutions	7	5	—	—
Arson	—	—	5	3
Total	137	—	158	—

From Table I it will be noted that *theft* is of equal incidence in the European and Bantu series, but *crimes of violence* were more than twice as common in the Bantu.

Under *sex crimes*, there are 7 Europeans and 4 Bantu charged with rape, 2 Europeans charged with incest, and the remainder cases of *crimen injuria* and public indecency.

Under the heading *minor offences*, we have included trespassing and vagrancy in both series, contravention of the pass laws in the Bantu, and 'absconding from the Zonderwater work colony' in the European. Most of the 28 absconders had been originally sent to the colony for drunkenness, vagrancy, and failing to support their families (in that order of frequency).

TABLE II.—MALE EUROPEAN AND MALE BANTU MENTAL OBSERVATION CASES AT WESKOPPIES HOSPITAL DURING THREE YEARS 1951-53,

TABULATED ACCORDING TO REPORT ON MENTAL STATE

Race Group	*Certified as Mentally Disordered or Defective*	*Not Certified*		*Total*
		Without overt Abnormality	*With overt Abnormality*	
European	49	43	45	137
Bantu	122	30	6	158

CERTIFIED AS MENTALLY DISORDERED OR DEFECTIVE

In the European series 36% of the cases, and in the Bantu 77% of the cases, were certified as mentally disordered or defective. These cases were disposed of in one of 4 ways:

1. Declared Governor-General Decision cases (G.G.D's.). This procedure is usually reserved for serious charges. Of the 8 European G.G.D. cases, 1 was considered not certifiable during the period of observation, but on evidence led at the trial, it was judged that he had been mentally disordered at the time of the crime. In the Bantu series 2 of 24 G.G.D. cases answered this description.

2. From penal institutions, found certifiable as mentally disordered or defective and brought under

section 34 of the Act. Under this section convicted prisoners are held in a mental hospital until (*a*) they recover and are sent back to jail or (*b*) they are re-classified as ordinary patients when their sentences expire.

3. Charge dropped and the patients certified as ordinary mental cases by the local district surgeons (the majority of cases).

4. Opinion given that the patients had probably been disordered at the time of the crime but had subsequently recovered (3 European and 17 Bantu). These cases were sent back to the courts for disposal. The charges were not serious, and the patients were not sent back to hospital like the G.G.D. cases in group 1. The 3 European cases comprised 1 acute alcoholic and 2 of manic depressive psychosis. The 17 Bantu cases comprised 7 of transient 'toxic infective state', 3 of acute alcoholic psychosis, 3 of pellagra psychosis, 2 of psychoneurosis (hysteria), 1 of manic depressive psychosis and 1 of post-traumatic epilepsy in which opinion was given that the epilepsy was unrelated to the crime.

TABLE IIIA.—PSYCHIATRIC DIAGNOSES OF CERTIFIED MALE EUROPEAN AND BANTU OBSERVATION CASES AT WESKOPPIES HOSPITAL DURING 3 YEARS 1951-53

Groups of Mental Disorder	*Psychiatric Diagnosis*	*European* No. of Patients	%	*Bantu* No. of Patients	%
Organic States	Senile	1		2	
	Cerebral Syphilis	1		4	
	Alcoholic	5	16	8	24
	Toxi-Infective	1		11	
	Pellagra	—		4	
Functional Psychoses	Manic-Depressive	9		4	
	Schizophrenia and Paranoid Series	16	51	68	59
Epilepsy	Epilepsy	3	6	10	8
Psycho-Neuroses	Hysteria	—	—	2	2
Mental Defect	With Epilepsy	—	27	2	7
	Without Epilepsy	13		7	

In Table IIIA we have divided the different types of mental disorder into 5 broad groups on clinical grounds. The groups have the following distinguishing features:

1. In the *Organic States* there is a more or less continuous clouding of consciousness associated with discoverable physical disease. Judgement is impaired as a result of predominantly intellectual inefficiency.

2. In the *Functional Psychoses*, which consist of the manic depressive psychoses, the schizophrenias and the paranoid series, the main feature is a disordered adjustment to reality with an associated defect of judgement and insight. Especially in the latter two sub-groups, projection mechanisms, i.e. hallucinations and delusions, with associated unpredictable behaviour figure prominently.

3. In the *Epilepsies* we find episodic disturbances of consciousness, associated with varying degrees of confusion.

4. In the *Psychoneuroses* the patient usually presents with one or more recognizable symptom-complexes. If the patient's history is available for study, these symptom-complexes can be related to faulty interpersonal relationships.

5. In the *Mental Defective Group* there is a permanent defect of reasoning ability, which precludes them from competing with their fellows in society.

In Table IIIB certain trends become apparent, which are similar in the European and Bantu series viz, in the 'organic states' group there are proportionately fewer admissions as observation cases, whereas in the functional and defective groups the reverse holds true.

RELATIONSHIP BETWEEN GROUPS OF MENTAL DISORDER TO TYPES OF CRIME

In the *organic states* minor offences predominated. More than half of the *epileptic group* committed crimes of violence.

In the *defective and functional groups* there was a scattering of the types of crime, with a slight emphasis on theft in the former, and violence in the latter.

TABLE IIIB.—DIAGNOSTIC CATEGORIES (PERCENTAGES) OF CERTIFIED MALE EUROPEAN AND BANTU OBSERVATION CASES AT WESKOPPIES HOSPITAL (3 YEARS 1951-53) COMPARED WITH THE CORRESPONDING PERCENTAGES OF TOTAL ADMISSIONS TO SOUTH AFRICAN MENTAL HOSPITAL 1951[1]

Diagnostic Category	*Male European* Weskoppies Observation Cases (1951-1953)	*Male European* Whole of South Africa Administrations (1951)	*Male Bantu* Weskoppies Observation Cases (1951-1953)	*Male Bantu* Whole of South Africa Administrations (1951)
Organic States	16%	36%	24%	35%
Functional Psychoses	51%	32%	59%	50%
Epilepsy	6%	6%	8%	8%
Psycho-Neuroses	—	4½%	2%	½%
Mental Defect	27%	20%	7%	6%

When the Bantu *schizophrenia* cases were divided into 3 sub-types (no simplex cases occurred) a definite trend towards violence in the paranoid group was seen, minor offences occurred most commonly in the hebephrenic group, and in the catatonic group crimes of violence and theft were of equal frequency.

Previous studies of mental disorder in the Bantu have shown a paucity of *manic depressive psychosis*.[2,3] This has been borne out in this study, where only 4 Bantu cases were met with. Manic depressive psychosis comprised but 6% of the functional group in the Bantu and 36% of the corresponding European group.

The manic depressive cases showed a tendency to commit crimes of violence. They were all of the manic type.

RECIDIVISM AND PSYCHOPATHY

Before proceeding with the study of the uncertified cases, it is advisable to make some comments on these 2 terms.

By *recidivism* we mean repeated delinquency in minors and criminality in adults, despite punishment and corrective measures such as are applied in reformatories and work colonies.

The definition of a *psychopathic personality* is vague and constitutes a contentious psychiatric problem. We are using the definition given by Dr. Denis Hill before the recent Royal Commission on Capital Punishment in the United Kingdom.[4]

'The diagnosis is made on persons of habitual abnormal behaviour, behaviour which has been abnormal from childhood and the disorder of behaviour is seen in abnormal emotional reactivity, so that the individual who has it shows abnormal outbursts of temper, outbursts of impulsive violence, outbursts of alcoholic excesses often repeated, of suicide attempts and in some cases of homicidal attempts. In their relations to society these people fail wherever they touch society. In their work records, for example, you find they have had a very large number of jobs. They go from one job to another, 40, 50 or 60 jobs for a man aged 30. The reasons are that he behaves impulsively towards his boss, he loses his temper, he strikes somebody, or he goes off in a sulk the moment he is frustrated. The same thing is seen in his relationships with his friends, and his marriage and his sex relationship is also disturbed in this way. He has no sense of responsibility, although he may be intellectually normal, even above normal. Also I think it is quite clear that he does not profit by experience. He cannot learn by his mistakes and, unfortunately, punishment is of no avail, and does not help him at the moment, nor does treatment.'

The line of demarcation between recidivism and psychopathy, as defined above, is not sharp, because recidivism is so often found in psychopaths and many features of the psychopathic personality are found, in lesser degree, in the habitual criminal. An accurate socio-psychological history is essential in differentiating between the two.

This distinction is in fact an academic one, *for every psychopathic personality in our study was a recidivist* (see Table VI). In any case we have no facilities for the psychiatric management of the psychopath. He does not fall under the provisions of the Mental Disorders Act as a certified patient, and should he be admitted as a voluntary boarder or inebriate, he invariably creates trouble amongst the mentally ill. Under ordinary mental-hospital conditions, escape is not a very difficult matter, and he frequently takes advantage of this. As Sir David Henderson said before the previously quoted Royal Commission, they are 'not sane enough to be at large and not insane enough (in terms of certifiability) to be suitable for Bedlam.'

NOT CERTIFIED AND WITHOUT OVERT ABNORMALITY

In this second group (of Table II) there were 43 European and 30 Bantu cases. *In none of these was it felt that their criminal responsibility was diminished by their mental condition.*

In Table IV we have divided the group of 43 Europeans into those with and without previous criminal records.

TABLE IV.—TYPE OF CRIME ALLEGED TO HAVE BEEN COMMITTED BY EUROPEANS WITHOUT OVERT PSYCHIATRIC ABNORMALITY, IN RELATION TO THEIR CRIMINAL RECORD

Type of Crime	*With Previous Criminal Record (Recidivists)*	*Without Previous Criminal Record (Non-Recidivists)*
Murder	1	3
Assault	—	1
Sex Crimes	—	7
Theft	16	1
Fraud	4	1
Minor Offences	3	6
Total	24	19

It would thus appear from a study of Table IV, either that (*a*) these individuals were facing a serious charge and a psychiatric defence was being contemplated (there were 11 non-recidivists out of the 12 individuals who had committed crimes of violence or capital offences) or (*b*) that they were habitual criminals who had nothing to lose by a sojourn in a mental hospital.

In the corresponding group of 30 Bantu cases, crimes of violence predominated, and the possibility of a psychiatric defence was being mooted. Cases with long criminal records were not found in this series. The question of psychopathic personality and recidivism has not been considered because of the impossibility of obtaining accurate histories, and because of the difficulties in assessing true social adjustment amongst them. They were usually migrant urban labourers who had but recently emerged from primitive rural tribal conditions.

NOT CERTIFIED BUT WITH OVERT ABNORMALITY

The 45 *European cases* in this group were made up as follows: 16 mentally backward, 14 with long alcoholic histories, 9 psychoneurotics, 3 with schizoid personalities, and 3 with serological evidence of syphilis in blood and spinal fluid.

The 6 *Bantu cases* in this group consisted of 3 men-



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tally backward, 1 congenital case of spastic diplegia, 1 behaviour problem of childhood, and 1 deaf-mute.

In all these cases *the abnormality was not considered to have impeded their sense of responsibility in relation to the alleged crime.*

Those considered *mentally backward* were separated from certifiable mental defectives by:

(*a*) A history of having been able to earn their livings in the open labour market, and

(*b*) Intelligence tests. These were used as a guide only. An intelligence quotient of 70 (mental age 10½ years) was taken as the border-line between feeble-mindedness and backwardness. The upper limit of backwardness is taken as an I.Q. of 85 (mental age 12½ years).

The problem of mental deficiency in the Bantu is complex; no satisfactory intelligence scale has yet been made available for our use. In both European and Bantu, the I.Q. does not correlate with social adaptation. Most of the cases in the backward group were charged with theft, and both European incest cases were in this category.

The alcoholics were individuals with long histories of over-indulgence in alcohol, but they did not present with intellectual deterioration or any associated psychosis. Most of them had absconded from the local work colony.

In our cases of *psychoneurosis* 6 were suffering from 'anxiety states'. These were diagnosed with due reference to the patient's previous history. They had to be differentiated from the anxiety found in most of the non-certifiable observation cases, who were reacting in a natural way to their predicament. There were also 1 case of chronic obsessional state and 2 of hysteria.

All 3 cases termed *schizoid personalities* were asocial and withdrawn. None exhibited delusions or hallucinations, but one had been treated previously at Tara Hospital, Johannesburg with insulin coma therapy.

In 3 of the non-certifiable cases *serological evidence of cerebral syphilis* was detected. Malarial therapy was administered, and the patients subsequently returned to Zonderwater Work Colony whence they had been sent.

In the Bantu series 2 cases presented with *physical deformities* without serious psychiatric disturbance. One Bantu child aged 11 years was sent in on a charge of assault and was diagnosed as a *primary behaviour disturbance of childhood.*

TABLE V.—TYPE OF CRIME ALLEGED TO HAVE BEEN COMMITTED BY EUROPEANS NOT CERTIFIED BUT WITH OVERT ABNORMALITY, IN RELATION TO THEIR CRIMINAL RECORD

Type of Crime	*With Previous Criminal Record (Recidivists)*	*Without Previous Criminal Record (Non-Recidivists)*
Murder	1	2
Assault	—	1
Sex Crimes	—	3
Theft	13	3
Minor Offences	15	7
Total	29	16

Table V revealed similar trends to Table IV.

CRIMINAL RECORD IN RELATION TO MENTAL STATE (EUROPEANS)

In Table VI it will be seen that the highest proportion of individuals with criminal records is amongst the 'not-certified' group, where the figure was 60%, as compared with 14% in the 'certified' group.

The cases in the 'certified' group consisted of 2 mentally backward epileptics, one simple schizophrenic, 3 feeble-minded patients, and a G.P.I. case with a psychopathic history. The last-mentioned man was the only certified patient who had been charged with the crime of fraud.

TABLE VI.—ALL THE EUROPEAN OBSERVATION CASES CLASSIFIED ACCORDING TO CRIMINAL RECORD AND INCIDENCE OF PSYCHOPATHIC PERSONALITY, IN RELATION TO MENTAL STATE

Mental State	*With Criminal Record*		*Without Criminal Record*		*Total*
	Psychopathic Personality	*Others*	*Psychopathic Personality*	*Others*	
Certified	1	6	0	42	49
Not Certified and without overt abnormality	10	14	0	19	43
Not Certified but with overt abnormality	4	25	0	16	45
Total	15	45	0	77	137

MALINGERING

In every case sent in for observation the possibility of malingering had to be considered, so as to exclude those individuals who were simulating insanity in order to evade responsibility for their crimes.

Amongst the 87 Europeans who were sent back to the courts, 24 were considered to have attempted to simulate symptoms of mental disorder. Twelve of these gave up the attempt during the course of observation in hospital.

Hallucinations and delusions were the commonest symptoms presented. Obvious inconsistencies soon became apparent. For example, when an individual with elaborate systemized delusions, who made inappropriate replies to questions and exhibited bizarre mannerisms, thought himself unobserved, he behaved quite normally in his associations with fellow patients. He abandoned his attempt when he realized that neither staff nor fellow patients were taking him seriously.

Those who presented with a bizarre behaviour disturbance resembling hypomania soon exhausted themselves, and either abandoned their malingering or assumed a more restful symptomatology copied from those around them.

Attempts at simulating amnesia, mental defect and epileptic fits were detected when the whole history of the patient was studied in relation to the presenting disorder.

In the Bantu series the problem was much simpler. Of the 36 cases who were not certified, 5 cases asserted that they had suffered from epileptic fits. However, no epileptic phenomena were observed during the period of observation, or from histories obtained from relations or jail officials. Another 3 cases claimed amnesia for their alleged crimes, but this was unsupported by any other evidence of psychiatric abnormality.

SUMMARY

A study of 295 male observation cases has been made.

These cases were studied in relation to their psychiatric diagnoses, and to the types of crime alleged to have been committed.

Of the European cases 36% were found to be certifiable, as against 77% of the Bantu cases.

In observation cases found mentally disordered, functional mental illness was found to be *more* prominent, and the organic mental states *less* prominent, than in the usual run of admissions.

Recidivism and psychopathy are defined and commented on.

In studying the crimes committed by the Europeans who were not certifiable, those facing charges of violence and capital offences had usually no previous criminal record. The reverse held true for the individuals with the other charges.

In the cases that presented with an overt abnormality, yet were not certifiable, the abnormalities have been described.

In the European group, when correlating criminal record with mental state it was found that a history of previous convictions was uncommon in the certified cases, but extremely common in the others.

Simulation of mental disorder by observation cases was found, and has been described.

Throughout the study, comparisons have been made between the European and Bantu groups.

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NIVAQUINE AND CAMOQUIN IN MALARIA

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During January and February 1953 a serious outbreak of malaria occurred throughout most of Northern Zululand; in the opinion of many old inhabitants of the area it was the worst epidemic experienced for at least 25 years. All cases occurring in this area (the Hlabisa district) were treated with either 'nivaquine', (chloroquine sulphate, May and Baker, Ltd.) or 'camoquin' (amodiaquin dihydrochloride dihydrate, Parke, Davis and Co., Ltd.). Throughout most of this period I was acting as locum tenens for my colleague, the other medical man in the district, while he was away on vacation, and pressure of work did not allow of detailed observation and investigation of the cases of malaria which occurred. The consequent scientific shortcomings of this paper are fully realized. However, it is in the more remote and under-doctored areas that epidemics of this severity are most likely to occur and my experience with the 2 drugs may be of interest to medical officers similarly situated.

Causes of the Epidemic. Malaria has always been endemic in this region, but over the last decade vigorous control measures have caused a spectacular drop in the number of cases. In the 5 years preceding the present outbreak, very few cases were seen, and the majority of those diagnosed occurred in people who had been on fishing trips, either to places near the Portuguese East African border, or to places in Portuguese East African territory itself.

Climatic conditions during the late spring and early summer months of 1952 were extremely favourable for the breeding of Anopheles mosquitoes, and this was the main causative factor in the epidemic. However, people had gradually been becoming careless in their precautions and control measures, and this complacency was an important contributory factor. The epidemic may therefore have taught a valuable lesson—that malaria is by no means eradicated here, and consequently there must be no carelessness or slackening in control measures.

Course and Treatment. Only cases confirmed by positive blood-slides are included in this analysis. All were cases of malignant sub-tertian infection. In all, 128 positive cases were seen and treated; of these 17 were European, and 111 were non-European.

EUROPEAN CASES

All the European cases were treated in their homes, since the nearest European hospital is some 35 miles away. The majority of European cases occurred early in the epidemic, when I was using nivaquine only in

treatment. My reason for using nivaquine was that it had given excellent results in previous cases of malaria; moreover I had used it extensively and in large dosage in cases of amoebic hepatitis and liver abscess, and knew from experience that the toxic or unpleasant effects were negligible. So 15 cases were treated with nivaquine and 2 with camoquin. By the time I had started using camoquin extensively, most Europeans in the area were taking nivaquine prophylactically, and all had greatly improved their control measures, so that during the latter half of the epidemic no European cases occurred.

The adult dosage of nivaquine used—slightly higher than that recommended by the manufacturers—was 4 tablets (together equivalent to 600mg. chloroquine base) at 6-hourly intervals twice on the first day, followed by 2 tablets morning and evening on the 2 days following. The dosage was reduced proportionately for the only 2 European children infected. Results were uniformly satisfactory. Temperatures returned to normal within 72 hours, and remained normal, while subjective improvement was equally rapid. All the patients were ambulant within 5 days, and by the end of a week all felt perfectly well, except for one adult male whose lips were not yet healed following rather severe herpes labialis. During the 11 months or more following the initial attacks all these patients have remained well, and there has been no suspicion of a recurrence of malaria. Even with the higher dosage no side-effects attributable to the nivaquine were noted.

The 2 European patients who were treated with camoquin both responded extremely well, the temperature returning to normal in less than 30 hours and remaining normal. Subjective improvement was also rapid, and both patients had resumed duty within 6 days. Neither complained of side-effects due to the camoquin, and neither has had any recurrence of malaria during the 11-month period following the initial attacks.

NON-EUROPEAN CASES

Of the 111 non-European patients with positive blood-slides treated in the Umfolozi Mill Native Hospital, 42 were treated with nivaquine, at the same dosage as in the European cases, i.e. 16 tablets spread over 3 days. I used the dosage higher than that recommended in the hope that patients could be discharged a little sooner. The hospital has 43 beds, but during this period there were never less than 70 patients in hospital, including a number of long-term cases, and consequently patients had perforce to be discharged as soon as the clinical condition allowed. Of these 42 cases, 6 received treatment for other conditions, such as bronchitis, tropical ulcer, etc., which prolonged their stay in hospital. The 36 cases of uncomplicated malaria spent 3, 4 or 5 days in hospital, with an average of 3.8 days.

In every case the temperature returned to normal in less than 72 hours, with no subsequent rise, while the subjective improvement was equally rapid. Indeed, many of these patients were requesting their discharge from hospital even before completion of the course of treatment. The 6 cases with complicating factors responded equally well, and would have been discharged within 5 days had they been treated solely for malaria.

Unfortunately, it has been virtually impossible to follow every case to date, because many patients are from outlying Native Reserves, and many others, in employment, have either returned to their homes or changed their places of employment. It has been possible to trace 19 of the 42 cases recently, and in none of them has there been any suspicion of a relapse. Of the remainder, the majority are still residing in the district, and would have reported sick either to my colleague or myself if there were a recurrence. Since neither of us has seen a patient with malaria since the epidemic ended it is reasonable to assume that the recurrence-rate has been negligible.

The non-European cases with positive blood-slides who were treated in the hospital with camoquin numbered 69. The adult dose was 3 tablets (together equivalent to 600 mg. camoquin base) given as a single dose, reduced accordingly for children. Five patients were treated for conditions other than malaria as well, and consequently spent a longer period in hospital. The response to treatment in the remaining 64 cases was impressive, except for 2 apparent failures. In these 2 cases, it was ascertained that vomiting had occurred shortly after the drug had been taken, and on repeating the dose both responded in the same manner as the others. In both cases, the vomiting was attributable to the malaria and not to the camoquin. Including the 2 apparent failures, the 64 uncomplicated cases spent 2, 3, 4 or 5 days in hospital, with an average of 3.2 days. Without exception, the temperature returned to normal within 36 hours and showed no subsequent rise. Subjective improvement was equally dramatic, and many of these patients were back at work within 3 or 4 days. The 5 cases who were treated for conditions other than malaria responded to camoquin in the same manner as the uncomplicated cases. No toxic effects attributable to camoquin were noted.

As with the group treated with Nivaquine, adequate follow-up has been impossible. Of those treated with camoquin 27 have been followed recently, and again there has been no suspicion of a recurrence in the 10-12 month period since treated. As with the nivaquine group, most are resident in the district and would consult either my colleague or myself if a recurrent attack occurred. Since no cases have been seen, it is a reasonable assumption that the recurrence-rate is negligible.

UNCONFIRMED CASES

The foregoing analysis applies only to cases seen by myself, diagnosed clinically, and confirmed by positive blood-slides. I also saw numerous cases of clinical malaria, and treated them as such, with results identical to those in the confirmed cases. It was impossible to withhold treatment while awaiting laboratory confirmation of one's diagnosis. Records were not kept of the clinical cases with 1 negative blood slide, but at least 100 such cases were treated with one or

other of the 2 drugs. In addition, many farmers were not bringing patients in at the height of the epidemic, but would merely report that they had a further number of cases, often as many as 10 or 12 on 1 day. All that could be done was to give them sufficient nivaquine or camoquin to treat the patients on the farms. There were at least 400 such cases. Obviously, one cannot assume that all were in fact suffering from malaria, but undoubtedly a considerable proportion of them were, and those who showed no improvement on the anti-malarial drugs were brought to hospital within 2 or 3 days, and invariably were found to be suffering from some other disease such as pneumonia, dysentery, etc.

Considerably more, then, than the 128 confirmed cases occurred in the district, and were treated with either nivaquine or camoquin, but unfortunately no exact record is available. There were no deaths in the treated cases, whether confirmed or unconfirmed. The recurrence rate in the unconfirmed cases must also be regarded as negligible.

PROPHYLACTIC USE

Many farmers, when it was obvious that the epidemic was becoming increasingly serious, sought advice on prophylaxis, and they were given either nivaquine or camoquin to issue to their employees. The dosage used was nivaquine 2 tablets once weekly (or 2 tablets twice weekly in the more heavily-infected regions) or camoquin 3 tablets every 14 days. Again it was quite impossible to keep an accurate record of the numbers who took one or other of the drugs, but it is certain that no cases of malaria occurred amongst those people taking either drug prophylactically.

None of the non-European patients taking the drugs in this way complained of untoward effects; probably if minor side-effects had occurred these people would have taken no notice of them, and certainly would not have reported them to me. Amongst European patients taking the drugs, a few complained of minor side-effects, quite insufficient to warrant stopping or changing the drug. The commonest complaint of the people taking nivaquine was increased sweating—a rather difficult matter to evaluate correctly in this climate during the worst months of summer. Throughout the epidemic I personally took nivaquine (2 tablets twice weekly) and noticed no side-effects whatever, though I particularly looked out for them. Amongst people taking camoquin a few complained of slight nausea, and several complained of lassitude after taking the drug—probably blaming the camoquin for their natural laziness.

CONCLUSIONS

From my experience of these 2 drugs in this epidemic my opinion is that both are extremely effective in the treatment of sub-tertian malaria, and that camoquin is preferable to nivaquine. The main advantages of camoquin are: (1) The more rapid remission of symptoms and the more rapid fall in temperature, and (2) the fact of being able to treat cases with a single dose—an enormous advantage in treating large numbers of backward people, the majority of whom cannot be treated in hospital.

As prophylactics the two drugs appear to be equally effective, but here again the great advantage of camoquin is that one dose a fortnight is adequate. Indeed, I am definitely of the opinion that in the event of a future epidemic like this one, the mass issue of camoquin to the African population, even if given only once (under supervision), combined with the usual anti-malarial measures, would lead to far more rapid control of the epidemic. In fact, I feel sure that by this method, if employed early and energetically, an epidemic could be averted, and confined merely to a minor outbreak of sporadic cases.

SUMMARY

Confirmed cases of malaria numbering 128 were treated during an epidemic in Zululand in January and February 1953, 57 with nivaquine and 71 with camoquin. Results were uniformly good; camoquin is preferred to nivaquine. Up to 10 or 12 months later the recurrence rate is negligible.

Several hundreds of probable cases were treated with one or other drug, apparently with excellent results. There were no deaths amongst the confirmed or unconfirmed cases.

An unknown number of people took the drugs prophylactically. No case occurred amongst these people. Camoquin is regarded as the prophylactic of choice.

It is suggested that the mass distribution of camoquin combined with the usual anti-malarial measures would greatly assist in preventing an outbreak assuming epidemic proportions.

My thanks are due to my assistant, Mr. P. L. Spendlove, and the non-European staff of the hospital for their loyal and untiring assistance during a very trying period. Also, I would like to express my thanks to the Government Pathological Laboratory, Durban, who examined most of the blood slides. In addition, I would like to thank Messrs. May and Baker, Ltd. and Messrs. Parke, Davis and Co., Ltd., for their very courteous and generous assistance. Finally, my thanks are due to the Board of Directors of the Umfolozi Co-operative Sugar Planters, Ltd. for permission to publish.

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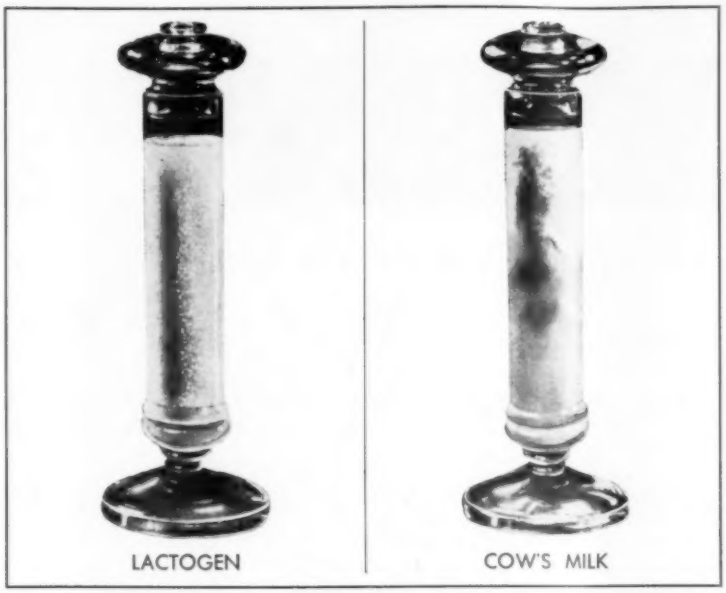
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SUDDEN DEATH FROM AN UNUSUAL CAUSE IN A PATIENT WITH PULMONARY TUBERCULOSIS

C. H. L. HOWELLS, B.Sc., M.B.

AND

J. SWITHINBANK, M.A., B.M.

From the Tuberculosis Research Association Unit, King George V Hospital, Durban, Natal

The treatment of pulmonary tuberculosis in the Bantu presents many difficulties not commonly encountered in the white races. Amongst these is the not infrequent association or another disease-entity. In the case described, such dual pathology did exist, and being unsuspected, led to the death of the patient.

CASE REPORT

A male Bantu, 26 years of age, was admitted to hospital suffering from severe bilateral, exudative pulmonary tuberculosis, which rendered him a suitable candidate for inclusion in a research scheme to test the therapeutic value of intramuscular tuberculin in combination with streptomycin and PAS. The history obtained from him was rather indefinite, but it appeared that though he had continued working up to 2 weeks before admission he had not been really well for a period of 8 months. For the last month he had suffered from a productive cough, night sweats, fatigue, and loss of weight. Previous to that he had been 'well', but admitted to having suffered from diarrhoea, which had been treated with herbs.

Examination showed a well-built young Zulu in fair general condition, though breathless and with pale mucous membranes. The relevant chest findings were diminished air entry in all areas of the right lung, with a pleural rub audible in the mid-zone posteriorly. Coarse rales were evident in the same area, and bilateral crepitations were present at the apices.

The only other abnormality found was a firm, painless enlargement of the liver extending to one finger's breadth below the costal margin in the mid-clavicular line.

X-ray of the chest showed infiltration in the upper and middle zones of the right lung, and the upper zone of the left lung, with bilateral apical cavitation. There was also some elevation of the right diaphragm.

Pathological investigations were as follows:

Sputum: Z.N. stain showed the presence of many acid-fast bacilli.

Blood: Hb. 8.6 g. Packed cell volume 32%. Film showed that the anaemia was normocytic and normochromic. White blood-cells 9,000 per c. mm. (polymorphs 66%, lymphocytes 32%, monocytes 1.5%, eosinophils 0.5%).

E.S.R. 74 mm. in 1 hr. (Westegren).

Stool. Blood and pus present and ova of trichuris trichiura but no other parasites found. No pathogenic organisms isolated.

COURSE

During the first few days after admission his temperature was irregular, with occasional spikes up to 102° F. In addition, he was passing frequent stools, but there was no definite diarrhoea. Seven days after admission, treatment with streptomycin, 1 g. per day, and PAS, 20 g. per day, was commenced. Two days later, the first dose of tuberculin was given. (0.003 mg. of the purified protein derivative). Since no reaction resulted from this, a further injection of 3 times the original dose was given 48 hours later, and after a further 2 days, the dose was again trebled, this third injection being given at 10 a.m. At 4 p.m. the same afternoon, the patient was called to stool. He collapsed outside the lavatory and died immediately.

AUTOPSY

Although the lungs were grossly affected by tuberculous disease, no intrathoracic cause of death was found at autopsy. On opening the abdominal cavity, however, the liver was seen to be congested and enlarged, with a thick-walled abscess cavity in the right lobe containing a quantity of greenish pus, which had burst through its covering and accumulated in the right paracolic gutter. The surrounding peritoneum was smooth and glistening, and there had been no attempt at loculation of the pus. Scrapings from the innermost layer of the abscess wall confirmed the morbid anatomical diagnosis of amoebiasis.

The presence of pus in the abdominal cavity emanating from rupture of an amoebic abscess, and the absence of peritoneal reaction or other demonstrable cause of death, left little doubt that death had resulted from peritoneal shock.

DISCUSSION

Despite the high incidence of virulent fulminating amoebic dysentery and its sequelae among the Native population of Natal,[1] pyrexia, a pleural rub and slight elevation of the right diaphragm are not readily ascribed to amoebic abscess in the presence of gross pulmonary tuberculosis.

An enlarged, firm and painless liver is found in many of our patients who subsequently do well, and in whom, after one year's observation in hospital, there is no evidence or suspicion of amoebic hepatitis or its sequelae. Gillman and Gillman [2] consider it possible that this type of enlargement in Africans is related to malnutrition and subsequent fatty and fibrotic change in the liver.

The absence of parasites from stools can also be misleading, since amoebae can only be demonstrated in 48% of cases of hepatic abscess (Manson-Bahr [3]).

This case is presented to indicate a possible pitfall for those treating cases of tuberculosis in a country where amoebic dysentery is not uncommon.

Our thanks are due to Drs. Vollum and Honor Smith for reading the typescript, and to Dr. B. A. Dormer for permission to publish this paper.

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CLOSED INJURIES OF THE URETHRA

G. CLIFFORD THOMSON

Johannesburg

Accidents involving the urethra are rare. The incidence at the London Hospital[1] over a 10-year period (1909-19) was 41, and it seems doubtful whether any surgeon can claim extensive experience in the treatment of this condition. On the Witwatersrand with its large mining industry, more of these accidents are probably seen than elsewhere.

Injury to the urethra not infrequently accompanies multiple injuries, particularly where fracture of the pelvis also occurs. At the Chamber of Mines Hospital, Johannesburg, in the 4-year period from 1949 to 1953, 59 patients were admitted with fracture of the pelvis, and of these 13 showed involvement of the urethra. Four patients were admitted without fracture of the pelvis, but with perineal injuries and involvement of the urethra.

Prognosis. Usually the results of treatment are satisfactory and the patients are able to resume their normal duties. There are, however, failures in treatment, and the sequelae are of such consequence that Clifford Morson[1] doubted whether any patient could ever be restored to perfect health after a complete rupture. Stricture formation, usually regarded as inevitable, is often the precursor of infection, calculus formation and pyonephrosis.

Impotence and sterility may also follow, and in patients entitled to compensation, the assessment of these complications becomes very difficult.

Treatment. The procedure generally adopted with closed intrapelvic injuries is to open the bladder and attempt to restore continuity either by traction on a Foley catheter or by splinting with a plain tube. In perineal injuries the damage is repaired by the open method: evacuation of the haematoma and suture of the urethra, the urine being diverted suprapubically.

I have adopted a somewhat different routine for the following reasons:

(1) Immediate repair of the traumatized urethra, which is often friable and easily torn, is difficult and probably better avoided.

(2) Splinting of the divided urethra with a catheter kept in for 10-14 days must inevitably lead to stricture formation. Good results reported following this procedure probably occur only in cases of incomplete rupture or contusion.

(3) Because of concomitant injuries these patients are usually severely shocked and benefit by delay prior to major surgery.

(4) It is difficult or impossible to estimate the extent of the urethral injury without direct exposure, and unnecessary surgery can be avoided by adopting the following measure.

The procedure I adopt is as follows: If there is the slightest reason to suspect rupture, laceration or contusion of the urethra, the bladder is exposed and a No. 18—20 Malecot catheter inserted through a cannula. After 2 weeks the suprapubic tube is clamped and the patient encouraged to urinate normally. If he is successful, the tube is withdrawn and generally no further treatment is required. If he fails, suprapubic drainage is continued for a further month, when a urethrogram will generally show a complete block at the membranous urethra. In these cases Badenoch's[2] pull-through repair is performed.

A similar routine is followed with perineal injuries, except that in the second stage the fibrous mass usually present at the site of rupture is excised and an end-to-end anastomosis performed.

Results. In a surprisingly high proportion of cases no second stage is required. Of the 15 patients in this series, only 2 have had second operations, viz., one with intrapelvic and one with perineal injury; this in spite of the fact that on admission there was every indication of severe trauma. All these patients were entitled to the benefits of the Workmen's Compensation Act, but no strictures were seen and no difficulty encountered with micturition, the only complaint being that of impotence.

It remains to be seen whether the delayed complications observed by Daniel[3] will arise, but one is reasonably certain that the use of retrograde catheters would have

led to complications far more rapidly than this method of treatment.

SUMMARY

A simpler method is described for the emergency treatment of closed urethral injuries.

I wish to acknowledge the assistance of the Medical Superintendent of the Chamber of Mines Hospital, Cottesloe, for making available the clinical notes on these patients and for permitting me to submit this communication for publication.

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THE PERIODIC MORTALITY OF FISH IN THE WALVIS REGION

AN EXTRACT FROM AN ARTICLE* BY

W. J. COPENHAGEN, *O.B.E.*, M.Sc., F.R.I.C., F.R.S.S.A.
Cape Town

(1) Almost every year a mass mortality of fish takes place in the Walvis region, South West Africa. These mortalities usually occur during December or January, but the period may sometimes extend to March.

A correlation exists between certain meteorological and oceanographical conditions and the appearance of the dead fish.

(2) Off the coast of South West Africa is a permanent area of approximately 6,000 square miles where the sea bottom is characterised by a diatomaceous ooze, green in colour, impregnated with sulphuretted hydrogen, and devoid of fish and other animal life. This constitutes the so-called 'Azoic Zone', lies between latitude 21° 30′ S. and 24° 30′ S., and extends approximately from the 150-metre bottom contour to the 50-metre bottom contour, the latter being about 3 miles off the land. A broad tongue of this sulphide ooze is also found on the sea bottom of Walvis Bay.

(3) The cold Benguela current flowing northwards over this bottom deposit is rich in nutrient salts and is well seeded with phytoplankton. In this environment, together with abundant sunshine, an extremely productive region results. This rich plankton (consisting of coastal and antarctic types) supplies the food for a vast quantity of surface fish, the principal varieties being the Pilchard (*Sardinops ocellata*), and the Maasbanker (*Trachurus trachurus*), bottom fish being extremely scarce or unknown.

(4) With the sudden onset of winds from north to west, the normal directional flow of the Benguela current is retarded or even reversed, and considerable masses of sub-tropical Atlantic Ocean water, highly saline, invade the coastal region. This results in surface temperatures being elevated from 13° to 24° C (i.e. by 9°) on occasion. Increases of 5-6° C are, however, more commonly experienced. These sudden increases of temperature and salinity bring about a destruction of the coastal plankton. Oceanic types of plankton and fish now temporarily inhabit the coastal waters.

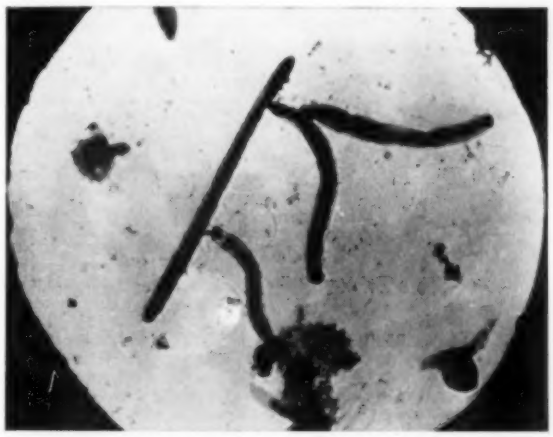
(5) The 'azoic zone' is thus augmented from time to time with organic matter in the form of dead plankton and higher forms of marine life that are destroyed by sudden chemical and physical changes.

As the bottom deposit is in an extremely fine state of division, it is implied that here bottom currents must be feeble, and moreover there is a tendency for this marine deposit to accumulate and thus a narrow layer of stagnant water is formed in the open sea.

Once these conditions are established, the dissolved oxygen becomes depleted, and in this anaerobic environment sulphate-reducing micro-organisms flourish, and the production of sulphuretted hydrogen ensues. If these conditions are not disturbed, so much sulphuretted hydrogen is produced that the lower layers of the water column become even more depleted in dissolved oxygen, and may exhibit evidence of dissolved sulphuretted hydrogen. Under certain meteorological conditions the bottom water may be forced up from the shelving sea bottom to the surface and surface fish will be killed.

* Copenhagen, W. J. (1953): The Periodic Mortality of Fish in the Walvis Region. Pretoria: Division of Fisheries, Investigational Report No. 14.

Acknowledgement is due to the Department of Commerce and Industries.



Halophilic sulphate-reducing bacteria, *Desulphovibrio desulphuricans*, isolated from sea mud, Walvis region. Magnification about 7,000. Electron micrograph by K. R. Butlin, Scientific and Industrial Research Laboratories, Teddington, England.

(6) The boundaries of the 'azoic zone', i.e. the permanent large area of sulphide diatomaceous deposit, fluctuate and depend on the quantity of dissolved oxygen and the speed of the bottom current. The rate at which dissolved oxygen can contact the bottom deposit controls the oxidation of sulphuretted hydrogen and also the oxidation of organic remains of plankton, thus decreasing or increasing the periphery of the 'azoic zone'. Apart from the usual factors governing the dissolved oxygen in the sea, the action of breakers and waves on sandy beaches and rocky ledges must be stressed. This ensures that the narrow strip from the shore 3 miles to seaward is well oxygenated, resulting in an abundance of marine life and bottom fish in this inshore band.

(7) The occurrence of poisonous plankton is also an important factor in the mass mortality of fish in this region. It is not known at present if poisonous dinoflagellates are brought in to the coast by the invasion of subtropical oceanic water, or if they are normally present in the coastal and antarctic plankton.

It is apparent, however, that in this fertile environment, under certain conditions, a 'bloom' or mass production of dinoflagellates belonging to the *Gymnodinium*, or allied species, occurs, and fish in this proximity will be destroyed.

(8) The complexity of the problem of the mass mortality of fish in the Walvis region should not be underrated. Although the permanent lack of dissolved oxygen in the bottom layers of the water column in the open sea has been stressed, it is not clear whether mortalities are caused by (*a*) anoxia, (*b*) anoxia plus sulphuretted hydrogen poisoning, or (*c*) poisonous plankton; or combinations of these factors.

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DR. JULIUS H. KRETZMAR

Recently in the press, and only last week by the Minister of Health, attention has been focussed on the problem of the shortage of nurses in South Africa. It is with the feeling that perhaps the medical profession has not interested itself in this problem that I have chosen it as the subject for my valedictory address.



Dr. Julius H. Kretzmar

The shortage in the nursing profession is widespread in the English-speaking countries. In the U.S.A., for example, in 1949, with a population of 140,000,000, there were 200,000 doctors and 300,000 practising trained nurses, and the call was, 'Needed: a million nurses'. In South Africa in 1953 with a population of 12 millions and over 6,000 doctors, there were registered with the Nursing Council (30 June) 12,634 medical and surgical female nurses and 323 male nurses, which with mental nurses, fever nurses, etc., brought the total to 13,689 registered nurses. The registered midwives numbered 8,666.

I do not think that sufficient tribute has been paid to the nursing profession—either to the normal personnel of our hospitals and nursing homes, or to the 'old guard', i.e. those nurses who have married and left the hospitals and have come back to help over the crisis. I want to pay that tribute tonight, especially to those of our old nurses and sisters who have come back to Kimberley Hospital since the war. Without them our hospital services here would have broken down.

Since the war, I have not heard of any action by the medical profession to promote the enrolment of South African girls in the nursing profession. What will doctors avail if there are no nurses to nurse the sick in the hospitals and nursing homes? Wards are closed for lack of nurses, and beds quietly slipped out of wards. It behoves us as a profession to lend our weighty support to the members of the nursing profession who are trying to increase the numbers of young girls entering that profession—not only now but in the years to come, year by year. Let me quote Dr. Bertram Bernheim, Associate Professor of Surgery of the Johns Hopkins Medical School and visiting surgeon to the Johns Hopkins Hospital, Baltimore. He says: 'The problem has been left almost entirely to the women, and the women have done a good job according to their lights, but their lights have been too dim and have lacked the penetration that the situation demands. How could it possibly be otherwise? They haven't had the first-hand knowledge required—knowledge and field experience—of doctors, who see the sick in every nook and corner of the land.'

CURRICULUM AND EXAMINATION REQUIREMENTS

To get an insight into what is required of a candidate for the nursing profession, read the regulations for the training and examination of medical and surgical nurses [1]: An educational standard at least equal to Standard 8. A period of training of 3½ years, of which 4-6 months in the 1st year and 3-4 months in the 2nd and 3rd years must be spent in a nursing college and 2½ years in the training hospital. In the Class II training schools the period is 4½ years. The syllabus and requirements for the preliminary and final examinations make interesting reading.

Let us see what the feeling on the subject is in Great Britain. Dr. L. Findlay [2] or Broadgreen Hospital, Liverpool, writes: 'I have been interested in and concerned with the theoretical training of student nurses for some 20 years. My view is that the broad basis of a nurse's training should be (*a*) an initial period of essential practical training, (*b*) a subsequent period of specialized training. This view may not be generally held but there is a widespread belief that radical changes should be made in the nursing curriculum.'

A few years ago there was a great outcry that the standard demanded from girls before entering the nursing profession was too high, and that the demands at examinations were too stringent and severe. The toll of failures was distressing and disheartening to the nurses themselves, to those in command of hospitals and to the doctors, who knew the worth of the nurses working in the wards. There was a demand for 'Quality in the Nursing Profession.' Granted. But listen again to Professor Bernheim:

'Let us look for a moment at present-day trends in nurse training. It is all geared for quality and not for quantity. As a result it isn't geared to meet the condition prevailing among sick people—the poor as well as the rich, those who live in towns and villages as well as in cities, those in the hospitals, at home, the seriously ill, the slightly ill, men, women and children. It is folly to have all nurses spend 3 years in training, and to demand 2 years in some cases, or maybe 4 years, of college work for entrance to nursing schools. We can't get quantity that way and we've got to have quantity as well as quality if we're going to do the nursing job that has to be done. Only part of the nursing personnel need the arduous 3 years training—the teachers, the supervisors, the operating-room nurses, the nurses for the very sick.' I have no objection to higher education. On the contrary I'm all for it—but what does the average trained nurse do that takes her such long years to learn? Why wouldn't it be much better for her and the sick if she spent more time on the wards and less in the class room? I lecture to the student nurses of two hospitals myself and they listen attentively, but they are young and immature and haven't the background to understand surgery of the stomach and intestines. Furthermore, I don't see what that has to do with taking temperatures, making beds, counting pulses, giving treatments, keeping records or even making observations. If you say it gives them more interest and makes them more intelligent, I might agree; but they could get the same interest and the same intelligence while walking the wards and handling patients. Perhaps I might add that, in the opinion of most doctors, nurses in training remember much of the material they are taught in the classroom only long enough to stand their State Board and then they forget it. Nurse after nurse has admitted as much to me'. These sentences, word for word almost, could apply to conditions in South Africa.

HOSPITALS' INCREASED DEMANDS FOR NURSES

Hospitals are being built all over the country. New medical schools are being established. Who is going to nurse the patients in these hospitals, and who is going to look after the sick that all the new doctors will be treating?

A big factor in the post-war problem of nursing-staff shortages was the introduction of free hospitalization. You will recall the hiring of beds in nursing homes by the Transvaal Administration because there were not enough beds in the hospitals to cope with the rush of patients. The patients came, but there were not enough beds and not enough nurses. When free hospitalization was introduced no preparation was made to supply the additional nursing staff it necessitated.

One feature probably peculiar to South Africa is the week-end avalanche of assault cases into the casualty departments of our hospitals. Every Saturday and Sunday night, when one would have thought there would be a breathing spell for the staff, there is a flood of non-European casualties.

Another trend leading to pressure on the nursing services has been the abandonment to a large extent of confinements at home in favour of maternity homes—expecially in the urban areas. This trend has been encouraged by the medical profession.

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The district nursing services impose a further demand on the nursing personnel, already unable to meet the needs of the hospitals.

PAY AND CONDITIONS

What can be done to attract the young people to a nursing career? Much of the difficulties are peculiar to the times we live in. Young people want to be free in the evenings and week-ends, and they command such high salaries that they are unwilling to accept a position that has in comparison low pay, long hours, long spells of physical strain and other unpleasant features. We of the medical profession are well aware of what these nurses are night and day doing in our hospitals. We must support the nursing profession in their efforts to correct this imbalance. I suggest that this nursing shortage would be greatly relieved if their rate of pay were so handsomely adjusted as to make the profession attractive from the economic aspect. They should receive higher pay—much higher in some categories—than typists and office attendants, with their easy time-schedules, today command.

Listen again to Professor Bernheim: 'To compensate for the unpleasant phases of the work and the danger involved they will have to discover means to make it attractive, and money is the starting point. The girl in training, the graduate nurse should be guaranteed adequate remuneration at least equal to and probably greater than what she would make in other fields. This thing of giving nurses in training a pittance in addition to their living is ridiculous. They do a full day's work, and more, and should be paid accordingly. Their exploitation should cease. Nor is that all. The restraints put upon them after working hours should be reviewed and drastically changed—in their favour. The nation has to have nurses. Short of drafting young women for training in nursing, similar to drafting boys for military training, the possible way to get them is to meet their terms. The matter is no different from meeting the terms of people in other walks of life. Heads of the nursing profession only think it is. They are so far out of touch as to keep mouthing a lot of old stuff about high duty, self-sacrifice, "the call" and such.'

These American words apply equally pungently to South African conditions. Let us think of what we pay our receptionists working from 9 to 5 or 6 and ponder over some of the wages earned by girls in their 'teens', when we study the present scales of pay in the nursing profession:

	Basic Salary	*C.O.L. Allowance*	*Nett Monthly*
Student Nurse	200—20—260 (less £136 for board and lodging)	100	£13 13s. 4d.—£18 13s. 4d.
Student Male Nurse	220—20—280 (no living-in)	100	£26 13s. 4d.—£31 13s. 4d.
Staff Nurse	380—20—450 (less £148 for board and lodging)	100	£27 6s. 8d.—£33 10s. 0d.
Sister	425—25—620 (less £148 for board and lodging)	100	£31 8s. 4d.—£47 6s. 8d.

A higher wage for the nursing profession should be regarded as essential national expenditure.

Writing on the problem of shortage of mental nurses in Britain Dr. L. C. Cook [3] of the Bexley Hospital, Kent, states: 'Many girls at the are of 15 are eager to nurse, but not being able to do so, and having to earn some money, start working in offices or shops. Girls with sociable, likeable personalities (in fact, those most suitable for nursing) tend to get on well and to make friends, and, not unnaturally, at the age of 17 to 18, they are unwilling to give up their jobs and their circle of friends in order to start work in a hospital with its quite different, and often longer, hours. For this reason, cadet schemes, which must occupy a girl from the time she leaves school and offer her a living wage, are essential'.

If the hospitals and nursing homes were better staffed, both by trained and untrained nurses, the physical and mental strain on the nurses would be relieved and the turnover of patients would be expedited.

One part of the student nurses' duties should be scrapped, viz. menial scullary and charwoman's work. Polishing walls, doors, lockers, washing furniture, etc.—the sort of work for which we employ servants in our homes—should not be part of a nurse's duties or training. Scullery maids and housemaids should do this work.

RETIRED AND AUXILIARY NURSES

Many married couples today, either from choice or necessity, decide that both partners shall earn a living. It should, therefore, be our declared policy to encourage married nurses to return to work in hospitals, even in a part-time capacity, and to arrange the necessary shifts for them.

Has sufficient been done amongst the members of the Red Cross Society, the St. John Ambulance Brigade and the Noodhulpliga to induce them to do duty in hospitals? They should of course be adequately paid. With practical training in the wards these keen and enthusiastic workers would very soon pull their weight. The chronic sick, particularly, could well be nursed by this type of staff. Remember the type of woman who did S.A.W.A.S. work during the war. The older woman, with long family and household experience, though without nursing training, could be usefully occupied in hospitals in making beds, feeding patients, taking temperatures and pulses, bathing patients, giving medicines, etc. and thus relieve the shortage of trained nurses.

NON-EUROPEAN NURSES

I do not think the medical profession as a whole and the genera public appreciate how the training of the non-European for nursing has progressed in the Union since 1903, when 2 probationers received their training in Lovedale. Today the Bantu and Coloured populations are making their contribution to the problem of nursing their own people. In 1948 there were 1,646 non-European students in training as medical and surgical nurses and 164 as midwives; today the figures are 1,900 and 250.

Miss J. McLarty,[4] who was the Matron of Baragwanath Hospital in Johannesburg, writes as follows: 'With modern opportunities for professional advancement, many non-European nurses now qualify as health visitors and school nurses and do valuable work in the field of public health. Many have attained the rank of ward sisters and some are in charge of hospitals and clinics in the country and an increasing number are assisting in teaching in training schools. This year, for the first time, a beginning with the training of non-European nurses as radiographers is being made . . . .'

Besides the registered nurses and midwives, non-European women in growing numbers are training as nursing aids.

These are steps in the right direction; the nursing of the non-European, Coloured and Indian sections of our population by their own people will lessen the shortage in the ranks of the Europeans. We have the example here in Kimberley Hospital; and where efficiency, enthusiasm and ability have been shown some prospect of reward by elevation in rank should be held out to these nurses to encourage and stimulate them to higher efforts.

SISTER HENRIETTA

This year is the centenary of the establishment of the nursing services as we understand them today. In 1854 Florence Nightingale began her work in the Crimean War and won immortality. Not so well known in our land, but revered and honoured by the nursing profession of Southern Africa, is the name of Sister Henrietta Stockdale, lovingly known as Sister Henrietta. In 1874, 20 years after Florence Nightingale went to the Crimea, Sister Henrietta arrived in South Africa. She was placed in command of a hospital under canvas in Kimberley, and here in the Diamond Fields under the guidance of Sister Henrietta arose the nursing services and profession of South Africa. She was the guiding spirit, the driving force, the tireless pioneer in the establishment of an organized hospital nursing service, a midwifery service, and the training of nurses and midwives. It was she who got the State to recognize the nursing and midwifery professions. In the cool and quiet solemnity of the chapel of Kimberley Hospital her memory is honoured with a plaque on which appear the simple words 'Pioneer and Sister in Charge of this Hospital 1879-1894'. In Kimberley Sister Henrietta, the Florence Nightingale of South Africa, wrote a glorious page in the history of our country.

AMENITIES FOR NURSES

But we have moved on 60 years from the days of Sister Henrietta. The happy hospital is its own and best recruiting officer. If girls

are well paid, and have not to look askance at their sisters in city offices, if their hours are reasonable, night and day, and the amenities necessary for high morale are provided, the shortage will disappear in time.

Just as during the World War II entertainments and movie shows were provided in camps and barracks to maintain morale, so this same type of diversion could be provided in the nurses' homes. The Y.M.C.A. and Toc H. came to excel in this work. Periodic performances would be welcomed by staff tired and weary after heavy toil in the wards....

In inland centres, especially where the summers are trying and enervating, it would be to the benefit of the nursing staff if swimming pools were built for them within the hospital grounds. Some hospitals already possess this amenity but many do not.

A plan that has been tried in the Northern Cape is the touring of surrounding towns and villages by English- and Afrikaans-speaking nurses to spread information about the nursing profession and arouse enthusiasm among girls and their parents. Sisters and sister tutors accompanied by staff nurses and students visit schools. Sunday schools, and Red Cross, St. John's and Noodhulpliga meetings and detachments to give talks and answer questions.

SUMMARY AND CONCLUSION

The following suggestions have been put forward in their address to remedy the nursing shortage:

1. Greatly increased pay.
2. Better working hours, by day and by night.
3. To strive for quality but make quantity a primary object.
4. To encourage married nurses to return to hospital, whether whole-time or part-time.
5. To propagandize repeatedly among the ranks of the Red Cross, St. Johns and Noodhulpliga.
6. To enrol women of the S.A.W.A.S. type—widows and older age-groups—to nurse the chronic sick and other suitable cases. Given part-time and good pay, they will come.
7. More effort to induce men to become male nurses.
8. Train Bantu, Coloured and Indian girls to nurse their own people, and give them adequate prospects of promotion.
9. Union-wide propaganda by films and radio.
10. Propaganda tours by nurses amongst parents and girls.
11. Maintain morale in nurses' homes by cinema shows, etc. (Y.M.C.A. and Toc H).
12. Provide pools for nurses in hospital grounds, especially in inland centres with trying summer climates.

'Wanted—5,000 nurses'. This problem is becoming more and more pressing with each passing year. The whole picture of medical attention and care of the sick is being changed by newer social concepts, and rapid advances in scientific medicine, which make hospitals increasingly necessary. We doctors tend to be more and more insistent that our patients come into hospital; which is good for our patients, but aggravates the problem. The time has surely long arrived when the medical profession, the nursing profession and the hospital authorities should make a serious effort to solve this serious national problem.

REFERENCES

1. Government Gazette Extraordinary, 4 September, 1953.
2. Findlay, L. (1954): Lancet **1**, 314. 6 Feb. 1954.
3. Cook, L. C. (1954): *Ibid.* **1**, 317. 6 Feb. 1954,
4. McLarty, J. (1954): S. Afr. Nursing J., March 1954.

ASSOCIATION NEWS : VERENIGINGSNUUS

JAARVERGADERING VAN DIE TAK ORANJE-VRYSTAAT EN BASOETOLAND

Die jaarvergadering van die Tak Oranje-Vrystaat en Basoetoland is in die vergadersaal van die Waterloo-Kafee, Kroonstad, op Saterdag 13 Februarie 1954 om 3.30 nm., deur dr. C. H. Derksen, die President, geopen. Daar was 32 ander lede aanwesig.

As blyk van eer en meegevoel met die afsterwe van dr. Haegert van Ladybrand en mev. Hagen van Harrismith het die vergadering tweekeer in stilte opgestaan.

Verkiesing van Ampsdraers

Die volgende ampsdraers is verkies:

President—Dr. F. P. Jacobsz. Dr. C. H. Derksen het die insignia aan dr. F. P. Jacobsz oorhandig en hom gevra om die vergadering verder te lei. Dr. Jacobsz het die vergadering bedank vir die eer hom bewys.

Vise-President—Dr. C. Derksen. *Ere-Sekretaris*—Dr. Beck de Villiers. *Ere-Tesourier*—Dr. J. G. Muller. *Lede van Takraad*—Drr. C. F. G. Troskie, J. S. Visser, K. M. Scott en P. M. S. Fischer.

Verslae

Die jaarverslae van die Ere-Sekretaris en die Ere-Tesourier is voorgelees en aangeneem.

Dr. R. Theron het bespreking ingelei i.v.m. die skenking aan die Biblioteek op Wits. Na wisseling van menings is besluit om die skenking te vergroot tensy daar ook 'n aansoek van Pretoria kom. In laasgenoemde geval sal daar 'n skenking aan albei gemaak word.

Die verslae vir die Noordelike, Sentrale, Noord-Oostelike en Basoetoelandse Afdelings is voorgelees.

President se Rede

N. C. H. Derksen het dr. B. de Villiers versoek om sy rede voor te lees. Dit het gegaan oor alkohol as maatskaplike en ekonomiese euwel en aanbevelings vir die bestryding daarvan.

Algemeen

Ooreenkoms met die Provinsiale Administrasie in verband met Gedeeltelike Vry Hospitalisasie. Dr. R. Theron het verslag gedoen oor die werk van die aangevulde komitee van die Federale Raad. Die ooreenkoms aangegaan is deur die vergadering bekragtig.

Sirkulêre i.v.m. Tandetrek deur Geneeshere. Die Vergadering was dit eens met die sienswyse van die Tandheelkundige Vereniging.

Doktersgelde. Die volgende is saam bespreek.

(*a*) Voorstelle van die Sentrale Afdeling i.v.m. die gelde vir algemene praktisyns.

(*b*) Voorstelle van die Noord-Oostelike Afdeling i.v.m. Sondae en vakansiedae.

(*c*) 'n Omsendbrief van Hoofkantoor.

In verband met laasgenoemde is besluit om dit na die Afdelings te verwys.

In verband met die algemene praktisynsgelde is na lang en deeglike bespreking die volgende besluite sonder teenstem op voorstel van drs. C. V. v. d. Merwe en J. W. v. d. Riet geneem:

(i) Dat die gelde vir konsultasies op kamers van 12s. 6d. tot 15s. verhoog word.
(ii) Dat die gelde vir huisbesoeke van 15s. tot £1 1s. verhoog word.
(iii) Dat die gelde vir nagbesoeke van £1 5s. tot £1 10s. verhoog word.
(iv) Dat die gelde vir huisbesoeke op Sondae en Openbare Vakansiedae (vir nuwe oproepe maar nie vir herbesoeke) £1 10s. sal wees.

Al die veranderings in die tarief sal op 1 April 1954 in werking tree.

Tarief op Ongevallewet. 'n Omsendbrief van Dr. Tonkin is gelees. Die vergadering was dit eens met die onderkomitee van die Federale Raad dat hy nie langer met die Tarief gediend is nie.

Om 6.10 nm. was die agenda afgehandel en het die vergadering verdaag.

PASSING EVENTS : IN DIE VERBYGAAN

TWELFTH ANNUAL HEALTH CONGRESS AT EAST LONDON

The Health Officials' Association of Southern Africa will hold its 12th Annual Health Congress in East London on 4-8 October, 1954. The meetings will be held in the City Hall.

The Congress will be opened by the Honourable the Minister of Health, Dr. A. J. R. van Rhijn. It will remain in session for 5 days, during which time papers on matters of importance in Public Health will be read and time will be allowed for discussion after each paper.

The Congress is open to representatives of Local Authorities and other bodies concerned with Public Health, including medical officers of health and other medical practitioners, health inspectors and health visitors as well as municipal councillors, and others interested.

Particulars may be obtained from Mr. R. S. Symons, Honorary Congress Secretary, P.O. Box 752, East London.

Lede word daaraan herinner dat die Vereniging 'n ooreenkoms met die Atlas Versekeringsmaatskappy het waarvolgens hulle versekering kan aangaan wat hulle dek teen eise deur derde partye of wat uit hul praktyke voortspruit.

Volgens ooreenkoms met die Federale Raad bevat die polis spesiale bepalings wat alleenlik op lede van die Vereniging van toepassing is, en wat deur geen ander maatskappy aangebied kan word nie.

Navrae kan aan die kantoor van die Vereniging (Posbus 643, Kaapstad), of aan enige kantoor van die Atlas Versekeringsmaatskappy gerig word.

NEW PARKE, DAVIS COMPANY

Parke, Davis & Company, who have handled extensive business in most of the African countries for many years, have registered a South African company under the title of Parke Davis & Co (Pty) Ltd.

Manufacturing will be commenced in the near future at Port Elizabeth and eventually most of the products now imported will be manufactured there. Chief among the products to be manufactured will be Chloromycetin, as well as all its various presentations—capsules, eye ointment, cream, etc. This will be the first antibiotic to be manufactured in Africa.

The Johannesburg offices of the new company are located in a new building—Leisk House, at the corner of Rissik & Bree Streets. Mr. E. H. Lambert has been appointed the Managing Director. He comes from Lancashire, England, studied at the Liverpool College of Pharmacy under Mr. Humphreys-Jones and qualified at Bloomsbury Square.

Mr. M. Dean, a chemical engineer who has had extensive experience of pharmaceutical and chemical engineering with the Company, has been appointed the Superintendent of Manufacturing at Port Elizabeth.

S.A. MEDICAL CONGRESS 21-26 JUNE 1954 PORT ELIZABETH

Members are reminded that if they intend being present at the South African Medical Congress to be held in Port Elizabeth from 21 to 26 June 1954, they should complete the intention cards which were recently sent to them and return them as soon as possible to the Organizing Secretary, South African Medical Congress 1954, P.O. Box 1137, Port Elizabeth.

Die Bestuur van die Jan Kriel-Skool vir Epileptici het uitnodigings uitgereik vir die Openingsplegtigheid in die skoolsaal van die nuwe Skoolgebou van die inrigting wat amptelik deur Sy Ed. die Minister van Onderwys, Kuns en Wetenskap op Vrydag, 7 Mei 1954 om 10 vm. geopen word.

POST-GRADUATE LECTURES AT UNIVERSITY OF CAPE TOWN

The first annual series of post-graduate lectures to be given in the Faculty of Medicine, University of Cape Town, commenced on 20 April when Dr. A. Kipps spoke on 'Some Aspects of the Nature and Behaviour of Antibodies directed against the Red Cells of Man and Animals'. The succeeding lectures to be given in the Falconer Lecture Theatre, Groote Schuur Hospital at 5.30-6.15 p.m. on Tuesday afternoons are as follow:

11 May	Dr. T. H. Mead	Biological Importance of Mucopolysaccharides.
18 May	Dr. O. Budtz-Olsen	Physiological Balance of Fluids and Electrolytes.
25 May	Prof. J. F. Brock	Fluctuations in the Solid and Fluid Compartments of the Body in Chronic Malnutrition.
1 June	Prof. J. F. P. Erasmus	Acute Post Operative Disturbance of Fluid and Electrolyte Balance.
8 June	Dr. L. Eales	Fluid and Electrolyte Balance in Renal Disease.
15 June	Dr. J. D. L. Hansen	Fluid and Electrolyte Balance in Infants.
27 July and 3 August	Dr. A. Polson	Physical Measurements in Biological Research.
10–17–31 August	Dr. O. Budtz-Olsen	Haemopoietic Factors. An Historical Approach.
7 September	Mr. J. D. du Plessis	The Effects of Gastrectomy.
14 September	Mr. J. H. Louw	Abdominal Surgery in Infants.
28 September	Prof. J. F. P. Erasmus	Obstructive Jaundice, with Special Reference to Carcinoma.
5 October	Prof. J. F. P. Erasmus	Carcinoma of the Colon and Rectum.
12–19 October	Prof. J. T. Louw	The Diagnosis and Treatment of Carcinoma of the Uterus.
26 October	Prof. J. T. Louw	Afibrinogenaemia and its Relation to Accidental Haemorrhage and Eclampsia.

NEW PREPARATIONS AND APPLIANCES : NUWE PREPARATE EN TOESTELLE

Insulin Novo, Semilente and Ultralente. The distributors advise that, in response to many requests, these two varieties are now available in a strength of 80 units per c.c., in 10 c.c. vials, in addition to the standard strength of 40 units per c.c.

Codis. Under this name the manufacturers of 'Disprin' (calcium aspirin) have introduced a new tablet containing calcium aspirin in combination with codeine phosphate and phenacetin in the same amounts as in Tab. Codein. B.P. Each tablet contains : acid. acetylsalicyl, 4 gr., phenacet. 4 gr., codein. phosph. 0.125 gr., calc. carb. 1.2 gr., acid. cit. (exsic.) 0.4 gr. and excip. ad 11.45 gr.

Codis tablets disperse rapidly when placed in water to form a solution of calcium aspirin and codeine phosphate with the phenacetin in fine suspension. The advantages of these type of tablets are that they do not harden with age and, the calcium aspirin and codeine phosphate being in solution, the irritation of the stomach wall by undissolved particles of aspirin is avoided. In addition, the rapid absorption of the soluble aspirin ensures prompt action.

Codis tablets are available from all chemists and druggists in 20-tablet bottles and in prescription packs of 100 tablets in foil. Literature and a sample will be sent on request to the manufacturers: Messrs. R. & C. Pharmaceuticals (Pty.) Limited, P.O. Box 344, Durban.

BOOK REVIEWS : BOEKRESENSIES

DISEASES OF CHILDREN

Aids to the Diagnosis and Treatment of Diseases of Children. By F. M. B. Allen, M.D., F.R.C.P. (Lond.) and O. D. Fisher, M.D., M.R.C.P. (Lond.), D.C.H. Ninth Edition. (Pp. 300. 8s. 6d.) London: Bailliere, Tindall & Cox Limited. 1953.

Contents: 1. The Newborn Infant. 2. Infant Feeding. 3. The Premature (Immature) Infant. 4. Vitamins and Vitamin Deficiency. 5. Diseases of the Alimentary System. 6. Diseases of the Respiratory System. 7. The Infectious Fevers. 8. Tuberculosis in Childhood. 9. Juvenile Rheumatism. 10. Diseases of the Circulatory System. 11. Diseases of the Genito-Urinary System. 12. Diseases of the Endocrine System and of Metabolism. 13. Diseases of the Nervous System. 14. Diseases of the Muscles. 15. Diseases of the Blood. 16. Diseases of the Skin. 17. Syphilis in Childhood. Appendix.

This book is intended for students and general practitioners. For such a small book the scope is so wide that there is inevitably a lack of detail that makes it unlikely to be of much value to practitioners.

For students the emphasis should be on essentials. But there is only a short description of gastro-enteritis and still less on dehydration and its treatment. Yet room is found for such rarities as familial periodic paralysis, parapertussis and phaeochromocytoma.

The description of diseases often lacks clarity. Transposition of the great vessels is described under dextrocardia in the acyanotic group of congenital heart diseases. In the paragraph headed 'adenoids' is an account of retropharyngeal abscess.

For such a short book there is a surprising and tiresome tendency to repetition. In no less than 3 places within 2 pages, it is stated that stomatitis may be caused by the contamination of feeding utensils. Smaller points in the text would not meet with general agreement either. It is usually taught that a thermometer is less likely to be traumatic than a finger when inserted into the rectum to demonstrate patency of the lumen. Nor is it generally accepted that physiological jaundice cause bile-staining of the basal ganglia.

This book is certainly not suitable as a student's only text-book of paediatrics. It could be used for a rapid review of the subject, or as an introduction, but it is not really suitable for this either.

P.M.S.

DISABILITY EVALUATION

Disability Evaluation: Principles of Treatment of Compensable Injuries. By Earl D. McBride, B.S., M.D., F.A.C.S. Fifth Edition. (Pp. 715 + xiv, with 375 figure numbers. £6). Philadelphia; London; Montreal: J. B. Lippincott Company. 1953.

Contents: 1. Basic Survey. 2. The Doctor as an Expert Witness. 3. Workmen's Compensation Laws. 4. Standardizing Medical Evaluation of Disability. 5. The Procedure of Analysis in Evaluating Disability. 6. Examination of the Disabled Person. 7. Joint Stiffness (Ankylosis). 8. Ankylosis of the Shoulder Joint. 9. Ankylosis of the Elbow Joint. 10. Ankylosis of the Wrist Joint. 11. Ankylosis of the Hand as a Unit. 12. Ankylosis of the Fingers. 13. Ankylosis of the Hip Joint. 14. Ankylosis of the Knee Joint. 15. Ankylosis of the Ankle Joint. 16. Ankylosis of the Toe Joints. 17. The Disability of Fractures. 18. Fractures of the Clavicle. 19. Fractures of the Scapula. 20. Fractures of the Humerus. 21. Fractures of the Forearm. 22. Fractures of the Carpus, Metacarpus and Phalanges. 23. Fractures of the Pelvis. 24. Fractures of the Femur. 25. Fractures of the Tibia and Fibula. 26. Fractures of the Tarsal Bones. 27. The Industrial Back. 28. The Trunk. 29. Muscles and Tendons. 30. Nerve Injuries. 31. Amputations. 32. Head Injuries. 33. Injuries of the Eye. 34. Injuries of the Ear. 35. Burns. 36. Hernia. 37. The Disability of Disease. 38. Employment of the Disabled Persons. Bibliography. Index.

This work is a comprehensive treatise on the assessment of disablement resulting from injuries sustained in the course of industrial employment and it lays practical emphasis not only on the compensation of the injured employee, but also on his rehabilitation in productive employment.

In estimating the percentage degree of permanent disablement resulting from injury the author adopts the logical principle of measuring the function of the affected part. In addition to clinical details, tests are described by which functional loss may be determined, and diagrams depicting normal and impaired function graphically illustrate the text.

The schedule of fixed assessments for specific injuries adopted by the International Association of Industrial Boards and Commissions is employed by the author as a basis for computing percentage degrees of disablement in general. These ratings differ from those scheduled under the Workmens' Compensation laws enacted in this country. However, this is not of material consequence, since the author exemplifies the method by which assessments may be converted with any fixed schedule used as a basis.

On the clinical side the mechanics of muscle, bone and joint function are exhaustively analysed, as is the modification of these functions resulting from injury. Much practical material is embodied in the chapters on fractures, ankyloses, amputations and nerve injuries and their treatment. Interest attaches to the tentatively-raised subject of the casual relationship between injury and disease, and to the scale of assessments suggested for cardio-vascular, pulmonary and other systemic disorders. Average healing-periods in respect of specific injuries are tabulated, and the objective of rendering the partially incapacitated employee fit for re-employment is kept constantly in view. Extensive fields of employment open to those suffering from varied disabilities are enumerated and the work concludes with a 6-page bibliography.

The review copy of this book contained several typographic errors, which, though they do not confuse the general theme, call for correction.

In the field of industrial employment the practical methods of approaching disability evaluation indicated in this book, consistently applied, should enable the medical assessor to achieve a measure of accurate uniformity in computing degrees of post-traumatic disablement.

R.H.P.

PUBLIC HEALTH

The Health of the Community. By C. F. Brockington, M.A., M.D., D.P.H., B.Chir. (Cantab.), M.R.C.S. (Eng.), L.R.C.P. (Lond.). (Pp. 415 + xiii. 32s.) London: J. & A. Churchill Limited. 1954.

Contents: Part I. The History of Public Health in Britain. 1. Public Health in Britain (Up to 1850). 2. Public Health in Britain (1850-1900). 3. Public Health in Britain (1900-1950). *Part II. Epidemiological Study and Practice.* 4. The Diagnosis of Disease in the Mass. 5. The Characteristics of Disease in the Mass. 6. The Treatment of Disease in the Mass. 7. The Changing Mortality Picture in Britain. *Part III. The Control of the Environment.* 8. The Relationship Between Environment and Health. 9. Infectious Disease and the Public Health. *Part IV. The Protection of the Vulnerable Classes.* 10. Hygiene in Infancy. 11. Hygiene in Pregnancy. 12. Social Aspects of Pregnancy. 13. Childbirth at Home. 14. The Health of the Normal Scholar. 15. Special Education of the Handicapped Child. 16. The Neglected Child. 17. The Worker. 18. The Handicapped. *Part V. Social Aspects of Community Health.* 19. The Social Aspects of Venereal Disease. 20. The Social Aspects of Tuberculosis. 21. The Social Aspects of Old Age. 22. The Social Aspects of Nutrition. 23. The Social Aspects of Mental Ill-Health. *Part VI. Public Health and the People.* 24. The Education of People for Health. 25. Families in Distress. 26. The Social Aspects of Hospital Care. 27. The Social Aspects of Family Doctoring. 28. The Health Centre. 29. A Full Health and Medical Service. Appendix. Index.

Professor Brockington has written a most comprehensive treatise on the present-day preventive and social medical set-up in the United Kingdom. He has particularly stressed the evolution of these health and social services, the result of hazards of the industrial revolution which inspired both medical and non-medical men to rouse the public conscience in Britain about the necessity for reforms and assist in piloting these on to the Statute book.

This treatise is a detailed study of the principles and practice of epidemiology in its widest sense. The services for the care of community health and the duties and responsibilities of the many socio-medical workers who are at present responsible for such services are set out in detail.

The reviewer has been greatly stimulated in the realization of how well the jigsaw puzzle of the National Health Service Act of 1946 has fallen into place notwithstanding the divided control which at present exists and the fact that the local authorities, and particularly the medical officers of health of such authorities, have been shorn of much of their responsibilities in so far as hospital and the personal health services are concerned. In compensation for the loss of such services the social aspects of medicine have assumed a far wider horizon in most local-authority health-departments, and the results will not be without interest to those of us in this country who are engaged in similar work.

Although written primarily for the student of medicine and the general practitioner this book will find a far wider reading public; and in the interests of the wider aspects of preventive medicine it is hoped that certain of the principles enunciated by Professor Brockington will in the near future be applied with benefit to this multi-racial country of ours.

The only criticism offered is the poor quality of the paper used, and the price, 32s., which appears high. Nevertheless, this book can be highly recommended to all those interested in the preventive

and social aspects of medicine, which hold the key to many of the ills to which man has fallen heir.

E.D.C.

Cape Town
2 April 1954

YEAR BOOK OF OBSTETRICS AND GYNAECOLOGY

The Year Book of Obstetrics and Gynecology (1953-1954 *Series*). Edited by J. P. Greenhill, B.S., M.D., F.A.C.S. (Pp. 567. $6.00). Chicago: The Year Book Publishers Inc. 1953.

Contents: Part I. Obstetrics. 1. Pregnancy. 2. Labor. 3. Puerperium. 4. The Newborn. *Part II.* Gynecology. 1. General Principles. 2. Diagnosis. 3. Infertility. 4. Operative Technic. 5. Infections. 6. Benign Tumors and Endometriosis. 7. Malignant Tumors. 8. Menstrual Disorders. 9. Endocrinology. Index.

The present volume, which adopts the same role as its predecessors, embraces a wide field of current literature and is a boon to the busy obstetrician and gynaecologist. It fills a niche in the library of those following this specialized branch of medicine, for it not only outlines the trends and application of the latest research, but also, by classifying the most modern views, it fulfils the design of a reference for more intensive study.

The editor is to be congratulated on his commentaries following certain important articles. The position of therapeutic abortion in the Scandinavian countries, as depicted in one of these commentaries, is illuminating. Modern advances in certain cases of haemorrhagic diathesis and the modern trend in the treatment of carcinoma of the uterus, both corpus and cervix, also call for mention.

Any specialist in obstetrics and gynaecology who is desirous of keeping abreast of his subject should at least be conversant with the contents of this excellent volume.

J.B.N.

A YEAR BOOK OF PAEDIATRICS

Year Book of Pediatrics. 1953-54 Series. Edited by Sydney S. Gellis, M.D. (Pp. 435 with 114 figures. $6.00) Chicago: Year Book Publishers Inc., 1954.

Contents: 1. Introduction. 2. The Premature and the Newborn. 3. Nutrition and Metabolism. 4. Infectious Disease and Immunity. 5. Allergy. 6. Dentistry and Otolaryngology. 7. Ophthalmology. 8. Respiratory Tract. 9. Gastro-intestinal Tract. 10. Genitourinary Tract. 11. Heart and Blood Vessels. 12. Blood. 13. Endocrinology. 14. Orthopedics. 15. Dermatology. 16. Neurology and Psychiatry. 17. Therapeutics and Toxicology. 18. Miscellaneous.

This year book of paediatrics needs no introduction to the initiated and the 1953-54 series continues to provide the standard of information and the range of subject-matter for which these volumes are notable. The year under consideration is June 1952 to May 1953, and it is obvious from the Summary of Contents that there has been no pause in the avalanche of contributions to progress in paediatrics.

Synopses of papers on a diversity of diseases are given, in some detail, with tables, diagrams, and photographs in abundance. Following each item is an Editorial Commentary supporting or criticizing—as the need may be—the article in question, so that the reader is given not only access to original work but also informed opinion on it. In these days of world-wide outpouring of medical literature, books such as this are invaluable in presenting the essentials of a selected number of items. The choice ranges over the whole of paediatrics and the Year Book serves as a miniature paediatric library. There is an excellent index. If any criticism can be levelled at the production it is that the print might be, with advantage, a little darker in tone.

For members of the profession within reach of a library it is a very great help. For those who do not have such facilities, yet wish to keep abreast of modern paediatric thought, practice and investigation, the book is an essential.

F.J.F.

PHYSIOLOGICAL CHEMISTRY

Review of Physiological Chemistry. By Harold A. Harper, Ph.D. (Pp. 328 Fourth Edition. $4.00) California: Lange Medical Publications, 1953.

Contents: 1. General and Physical Chemistry. 2. Carbohydrates. 3. Lipids. 4. Proteins. 5. Nucleoproteins and Nucleic Acids. 6. Vitamins. 7. Enzymes. 8. Biological Oxidation. 9. The Blood, Lymph and Cerebrospinal Fluid. 10. The Chemistry of Respiration. 11. Digestion and Absorption from the Gastro-Intestinal Tract. 12. Detoxication. 13. The Metabolism of Carbohydrate. 14. The Metabolism of Fat. 15. Protein and Amino Acid Metabolism. 16. Metabolism of Nucleic Acids and Their Derivatives. 17. The Functions and Tests of the Liver. 18. The Kidney and the Urine. 19. Water and Mineral Metabolism. 20. The Chemistry and Functions of the Hormones. 21. Calorimetry: Elements of Nutrition. 22. The Chemistry of the Tissues.

This review has been written for the student to use as a companion to the standard texts on physiological chemistry and for the post-graduate who needs to brush up his knowledge for higher examinations. The author's objective has been to give a concise account of established facts and principles and to leave controversial topics to larger texts and current journals.

This is no mere cram-book. It contains an immense amount of condensed information and is fully up to date. The subject matter is well arranged and clearly presented. Free use is made of structural formulae and there are numerous clear diagrams and figures. The index is good. A general list is given of the sources to which the reader is referred for more detailed information; the titles of the books in this list give some idea of the contents and the student has a sporting chance of finding what he wants without too much trouble, but the bare list of journals to be consulted is not particularly helpful in this connection. There are very few individual references and these to very recent work; presumably other references are left to the larger texts with which this book is meant to be used.

G.C.L.

CLINICAL OXIMETRY

Fundamentals and Applications of Clinical Oximetry. By Dr. W. G. Zijlstra. (Pp. 150 with 81 figures. Second edition. Florins 11.—) Assen: Van Gorcum & Comp., N.V., 1953.

Contents: 1. Introduction. 2. Principles, Methods, Techniques. 3. The Haemoreflector and Its Use for Measuring P.O.S. in Samples of Blood. 4. A Discussion Concerning Construction and Use of Instruments for the Continuous Observation of P.O.S. by Reflection. 5. P.O.S. Responses. 6. Clinical Applications of Haemoreflector and Cyclops. Literature.

The classical studies of Haldane, Henderson and Van Slyke on the oxygen saturation of arterial blood have provided us with considerable knowledge of anoxia in its various forms. The application of this to individual patients has been hindered because the blood has to be obtained by arterial puncture and skill and time are required to obtain satisfactory results with the Haldane or Van Slyke blood-gas apparatus.

Of recent years cardiac catheterization and the growth of thoracic surgery have increased the need for some simple method of determining the oxygen saturation quickly and easily. Oximetry is a way of doing this by photoelectric measurement of the relative changes in the absorption of light at 2 or more selected wave-lengths when haemoglobin is reduced or oxygenated. The first oximeters made use of the light absorption on transmission through thin layers of blood in a suitable chamber or in thin vascular areas such as the lobe of the ear. Such instruments, their use and drawbacks, are described, but the form of oximeter recommended by the author works by light reflected from the skin. It consists of a lamp which throws light of a selected colour through a hole in the centre of a barrier-layer photoelectric cell onto the skin, from which unabsorbed light is reflected into the active surface of the photo cell. Maximum capillary dilatation and arterialization of the blood is achieved by ionophoresis of histamine into the chosen area of skin, conveniently the skin of the forehead.

This book should be of value to those working in this field. Its contents are largely technical. The applications of oximetry occupy a third of the book; they are of more general interest but should appeal specially to anaesthetists and to those concerned with modern thoracic surgery.

G.C.L.

GYNAECOLOGY

Textbook of Gynecology. By John I. Brewer, B.S., M.D., Ph.D. (Pp. 531 + xviii with 146 figures. 76s. 6d.) London: Bailliëre, Tindall and Cox, 1953.

Contents: Part I. 1. Diseases of the Vulva. 2. Tumors of the Vagina. 3. Carcinoma of the Cervix. 4. Uterine Fibroids. 5. Carcinoma of the Endometrium. 6. Sarcoma of the Uterus. 7. Pelvic Inflammatory Disease. 8. Ectopic Pregnancy. 9. Ovarian Tumors. 10. Endometriosis. 11. Congenital Anomalies. *Part II.* 12. Leukorrhea. 13. Asymptomatic Pelvic Tumors. 14. Abnormal Uterine Bleeding (*a*) With Tumor. (*b*) Without Tumor. 15. Bleeding and Pain (*a*) With Tumor (*b*) Without

Tumor. 16. Pelvic Pain (*a*) With Tumor (*b*) Without Tumor. 17. Dysmenorrhea. 18. Amenorrhea. 19. Sterility. 20. Dyspareunia. 21. Bearing-Down Discomfort; Mass Protruding from the Vagina. 22. Incontinence of Urine. 23. Incontinence of Feces. 24. The Climacteric. Index.

This book is divided into 2 parts. The first part deals in the orthodox manner with such entities as tumours of the vulva, vagina, uterus and adnexae, pelvic inflammatory disease and ectopic pregnancy. The second—and greater—part of the book is concerned with the differential diagnosis of gynaecological symptoms and signs such as dysmenorrhoea, amenorrhoea, uterine bleeding, leucorrhoea and others.

According to the author (who is Professor of Obstetrics and Gynaecology, at the North-western University Medical School in the United States) the second part has been written with a dual purpose. Firstly he wishes to arouse the student's interest and stimulate thinking, and secondly to train the student to consider the patient's problem from the standpoint of her symptoms or signs. He succeeds in doing this very well. The chapter on pelvic pain is especially recommended for study.

All the subjects are dealt with systematically and thoroughly, but unproven theories and extensive discussions on methods of management are omitted. The illustrations are good and the text reads easily.

Although this book is primarily intended for the undergraduate student it might well be acquired by post-graduates.

J. N. de V.

DIFFERENTIAL DIAGNOSIS

French's Index of Differential Diagnosis. Edited by Arthur H. Douthwaite, M.D., F.R.C.P. By the following Contributors: Sir Adolphe Abrahams, O.B.E., M.A., M.D., F.R.C.P., Hedley J. B. Atkins, D.M., M.Ch., F.R.C.S., P. M. F. Bishop, B.A., D.M., M.R.C.P., K. W. Donald, D.S.C., M.A., M.D., F.R.C.P., Arthur H. Douthwaite, M.D., F.R.C.P., Frank A. Elliott, M.B., Ch.B., F.R.C.P., John L. Franklin, M.A., M.D., M.R.C.P., C. J. Gavey, M.D., F.R.C.P., Arthur O. Gray, M.D., F.R.C.S., F.R.C.P., F.R.C.O.G., Frank W. Law, M.A., M.D., F.R.C.S., Noel F. Maclagan, D.Sc., M.D., F.R.C.P., F.R.I.C., William Mayhew Mollison, C.B.E., M.A., M.Ch., F.R.C.S., Howard Nicholson, M.D., F.R.C.P., Sir William Heneage Ogilvie, K.B.E., M.A., M.Ch., M.D., F.R.C.S., Desmond O'Neill, M.C., M.D., M.R.C.P., D.P.M., Eric W. Riches, M.C., M.S., F.R.C.S., J. G. Scadding, M.D., F.R.C.P., R. L. Waterfield, M.B., B.S., M.R.C.P. (Pp. 1058 with 731 illustrations, 200 in colour. Seventh Edition. 105s.) Bristol: John Wright & Sons Ltd., 1954.

The 7th edition of French, revised by Dr. A. H. Douthwaite, is of a somewhat mixed quality.

In an index of differential diagnosis lengthy lists of causes of symptoms are unavoidable, but it is a pity that there is not some method of differentiating the common from the uncommon and the important from the unimportant by using, for instance, different qualities of type in the lists. The scores of causes of albuminuria hypertension, pyrexia of unknown origin, haematemesis, are listed without any indication of the emphasis with which they should be regarded in practice. Causes of colic of various sorts cover 3 columns on each of 2 pages.

In the text, certain of the authors have successfully attempted to introduce brief descriptions of mechanisms of production of symptoms, which makes for interesting reading; others do no more than list causes and then give a few lines of description of each. The text usually, but not invariably, gives an indication of commonness or importance of symptoms listed.

One wonders why books of this sort continue to perpetuate 'traditional' views. For example, the periodic emptying of a hydronephrosis is still listed as a cause of transient polyuria, 'perihepatitis' is given as a cause of the ascites of cirrhosis of the liver that persists for longer than a year after the first tapping, and apical dental abscess remains as a cause of chronic low-grade anaemia. Argyll-Robertson's description of 'his' pupil is not correctly quoted.

What then is the reason for the popularity of this book, now in its 7th edition since 1912? There certainly is a need for a book that lists symptoms and their causes, both for medical students and for medical practitioners. There is also a need for a book that attempts to explain mechanisms of symptoms on a basis of disordered physiology, as this book does in certain sections. The illustrations are good. Some are carried over from the first edition, others are new. The coloured illustrations of external and fundal ocular conditions need special mention. The index, covering 145 pages, with its numerous cross references, is also valuable. There are useful sections on laboratory aids to diagnosis.

For those who feel the need for an index of differential diagnosis, and who appreciate the limitations of a single-volume index, this 7th edition of French will be a useful addition to the bookshelf.

G.A.E.

CORRESPONDENCE : BRIEWERUBRIEK

ELI LILLY MEDICAL RESEARCH FELLOWSHIP (S.A.)

To the Editor: I would like to draw the attention of medical practitioners, registered in South Africa, to the fact that applications may now be submitted for the 1954 award of this Fellowship.

The value of the Fellowship is $250 a month, for 12 months, plus return travelling expenses to the point of study in the U.S.A.

Details about the conditions of the award were published in this *Journal* under *Passing Events* in the issue of 27 February 1954.

Information may also be obtained from the undersigned. Closing date for applications is 15 June 1954.

H. A. Shapiro
Honorary Chairman Selection Committee
Eli Lilly Medical Research Fellowship (S.A.)

P.O. Box 2980
Cape Town
15 April 1954

WYSIGINGSWETSONTWERP OP GENEESHERE, TANDARTSE EN APTEKERS

Aan die Redakteur: Ons, as lede van die Mediese Assosiasie, kyk tereg op na die tydskrif om op hoogte van sake gehou te word aangaande sake wat die eer en belange van die Mediese Professie raak. Die amenderende Wet in sake die Wet op Geneeshere, Tandartse en Aptekers, wat tans voor die Parlement dien, is by uitstek so 'n saak. Die tweede lesing van hierdie wet word weergegee in die jongste uitgawe van Hansard se Verslae en dit skyn asof hierdie wet wel ook deur die Senaat goedgekeur sal word en promulgeer sal word as Wet nog voordat die professie as 'n geheel bewus is van die inhoud daarvan.

Aangesien dit moontlik is dat slegs 'n handjievol Mediese praktisyns intekenaars op Hansard is, skrywe ek met die versoek dat u die verslag van die debat sal herdruk in u tydskrif.

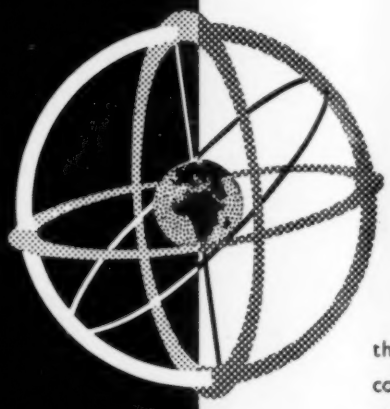
Ek is oortuig daarvan dat in 'n saak wat so lewensbelangrik is as hierdie, dat die professie nie verwag moet word om staat te maak op die verkorte en soms afgewaterde verslae van Parlementêre verslaggewers aan die pers nie. Die volle implikasies van die wet vloei voort uit die sienswyses soos uitgespreek deur die Minister van Gesondheid en ander Volksraadslede.

Die gees van die gesproke woord ly soms wanneer dit vertaal word en mag ek aan die hand doen dat die toesprake publiseer word in die taal waarin die rede gevoer was.

G. W. Schepers

Kingsway 63
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14 April 1954

[Die Hansardverslag sal 50 velle van die *Tydskrif* in beslag neem. *Redakteur.*]



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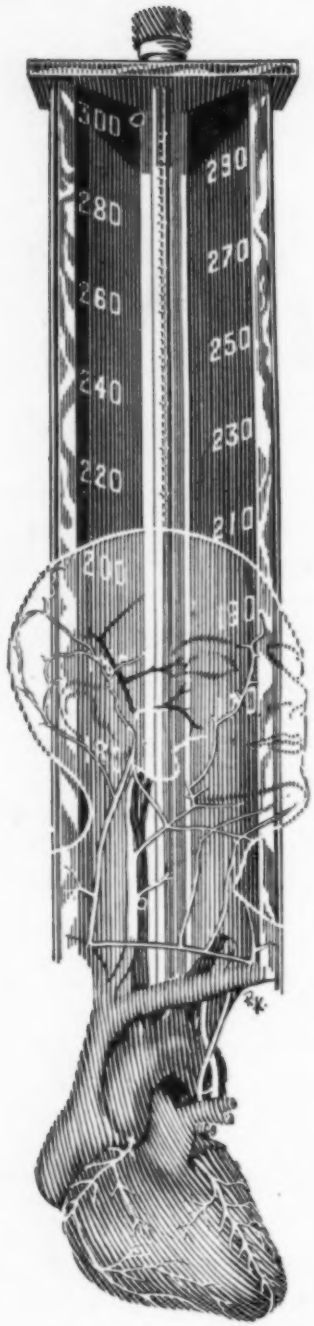
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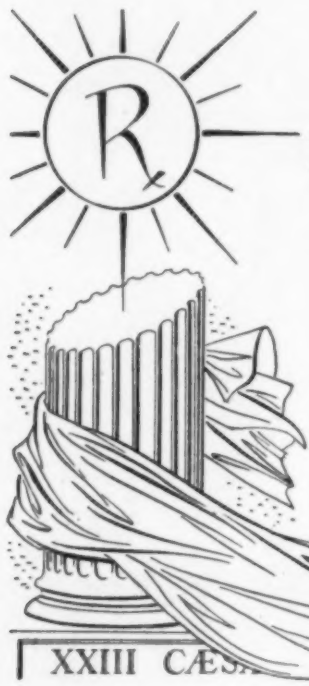
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S.A. Medical Journal

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Provinsiale Administrasie van die Kaap die Goeie Hoop

UNIVERSITEIT VAN KAAPSTAD

GESAMENTLIKE MEDIESE PERSONEEL VIR GROOTE SCHUUR- EN ANDER OPLEIDINGSHOSPITALE

VAKATURE

1. Aansoeke word ingewag van geregistreerde Geneeshere (Geregistreerde Spesialiste) vir aanstelling tot die volgende vakante pos:

DEPARTEMENT VAN PATOLOGIE

1 pos van Geneesheer, Graad D (Derde Assistent) met salaris volgens die skaal £1,200 x 50—£1,500 per jaar.

2. Die diensvoorwaardes word voorgeskryf ingevolge die Ordonnansie op Hospitaalraadsdiens no. 19 van 1941, soos gewysig, en die regulasies wat daarkragtens opgestel is.

3. Benewens die salarisskaal soos aangedui is 'n lewenskostetoelae betaalbaar aan voltydse beamptes en werknemers teen bedrae wat van tyd tot tyd deur die Administrateur vasgestel word.

4. Van die Gesamentlike Mediese Personeel word vereis om die Provinsiale Administrasie van die Kaap die Goeie Hoop en die Universiteit van Kaapstad gesamentlik te dien.

5. Kandidate moet geregistreerde spesialiste wees in die spesialiteit waarin die vakature bestaan.

6. Die geslaagde kandidaat, indien nie reeds in die Hospitaalraadsdiens nie, moet bevredigende geboorte- en gesondheidsertifikate indien.

7. Aansoek moet gedoen word op voorgeskrewe vorm (Staf 23) wat verkrygbaar is by die Direkteur van Hospitaaldienste, Posbus 2060, Kaapstad, of by die Mediese Superintendent van enige Provinsiale Hospitaal of Sekretaris van enige Skoolraad in die Kaapprovinsie.

8. Aansoeke moet aan die Direkteur van Hospitaaldienste, Posbus 2060, Kaapstad, gerig word, en moet hom nie later as 15 Mei 1954, bereik nie.

9. Kandidate moet die vroegste datum meld waarop hulle diens kan aanvaar.

M127095

Public Service Vacancies

1. The attention of Medical Practitioners and Dentists registered with the South African Medical and Dental Council is drawn to an advertisement appearing in the Government Gazettes of 15, 23 and 30 April 1954, inviting applications for the undermentioned posts in the Public Service.

Post	*Salary Scale*	*Department or Administration*
Chief Dental Inspector of Schools (Transvaal) Education Department).	£1,080x60–1,500	Transvaal Provincial Administration. Closing date: 29 May 1954.
Medical Officer (Mental Hospital Service).	£1,020x60–1,380	Health.
Medical Officer (Kimberley and Durban).	£1,020x60–1,380	Health.
Medical Officer (Ovamboland, S.W.A.)	£1,020x60–£1,380	South West Africa Administration.
District Surgeon, Grade III (Nylstroom and Pietermaritzburg).	£1,020x60–1,380	Health.
Medical Officer (on contract for two years) (Cradock).	£1,020x60–1,380	Health.

2. In addition to salary a cost of living allowance at the rate of £234 per annum is at present payable to married officers.

3. It is emphasised that full particulars of qualifications and previous experience must be furnished but original certificates and testimonials should not be submitted. Application forms Z. 83 and P.S.C. 8 (*a*) are obtainable from the department-administration indicated to whom filled in forms must be addressed.

4. The closing date for the receipt of applications is 15 May 1954, except where otherwise indicated.

(45251)

Provincial Administration of the Cape of Good Hope

UNIVERSITY OF CAPE TOWN

JOINT MEDICAL STAFF FOR GROOTE SCHUUR AND OTHER TEACHING HOSPITALS

VACANCY

1. Applications are invited from registered Medical Practitioners (Registered Specialists) for appointment to the following vacant post:

DEPARTMENT OF PATHOLOGY

1 post of Medical Practitioner, Grade D (Third Assistant) with salary on the scale £1,200 x 50—£1,500 per annum.

2. Conditions of service are prescribed in terms of Hospital Board Service Ordinance No. 19 of 1941, as amended, and the regulations framed thereunder.

3. In addition to the scale of salary indicated a cost-of-living allowance at rates prescribed from time to time by the Administrator is payable to whole-time officials and employees.

4. The Joint Medical Staff is required to serve jointly the Provincial Administration of the Cape of Good Hope and the University of Cape Town.

5. Candidates must be registered specialists in the speciality in which the vacancy exists.

6. The successful candidate, if not already in the Hospital Board Service, will be required to submit satisfactory birth and health certificates.

7. Application must be made on the prescribed form (Staff 23) which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or from the Medical Superintendent of any Provincial Hospital or Secretary of any School Board in the Cape Province.

8. Applications must be addressed to the Director of Hospital Services, P.O. Box 2060, Cape Town, and must reach him not later than 15 May, 1954.

9. Candidates must state the earliest date on which they can assume duty.

M127095

Vakature: Geneesheer-direkteur

Aansoeke op Vorm Z.83 verkrygbaar van Magistraatskantore word gevra vir 'n pos van Geneesheer-Direkteur by die Provinsiale Hospitaal, Bethlehem, volgens skaal £1,000x30—£1,150 per jaar plus 'n nie-pensioendraende huistoelae van £180 per jaar en lewenskostetoelae teen Staatsdienstarief.

Kandidate moet tweetalige Suid-Afrikaanse Burgers wees en as Mediese praktisyns by die Suid-Afrikaanse Mediese en Tandheelkundige Raad geregistreer wees.

Die aanstelling sal op twaalf maande proef wees en onderhewig aan die O.V.S. Hospitale-Ordonnansie, Nr. 13 van 1933, en die Regulasies daaronder uitgevaardig.

Die bekleër sal die administratiewe kliniese werk waarneem insluitende onder andere die volgende pligte:

(1) Mediese ondersoek van nuut-aangestelde amptenare by die Hospitaal.

(2) Beheer van Radiologiese Afdeling, Hospitaalapteek en indeling van bedde en teaters.

(3) Die behandeling van 20 Mediese vry-Pasiënte (daagliks.

Radiologiese ondervinding en vorige ondervinding in hospitaaladministrasie sal 'n aanbeveling wees.

Applikasies gemerk 'Geneesheer-Direkteur', vergesél van bevredigende geboorte- en gesondheidsertifikate met vermelding van vroegste datum waarop diens aanvaar kan word, moet die Sekretaris van die Hospitaal nie later as 20 Mei 1954 bereik nie.

A688965

VENNOOT BENODIG

Afrikaanssprekend, jonk, van Julie of later in groot dorp in Transvaal met sjirurgiese fasiliteite vir elke dokter in groot hospitaal. Lang gevestigde medisyne-aanmakende blank en naturelle-praktyk. Vennootskap na proefperiode. Aangename tipe vennootskapspraktyk. Skryf aan 'A.V.C.', Posbus 643, Kaapstad.

Die Mediese Vereniging van Suid-Afrika
The Medical Association of South Africa

AGENTSKAP-AFDELING : AGENCY DEPARTMENT

KAAPSTAD : CAPE TOWN

Posbus 643, Telefoon 2-6177 : P.O. Box 643, Telephone 2-6177
Waalstraat 35 : 35, Wale Street

(1596) Kaapse Middellande, Hospitaaldorp. Goedgevestigde eenmanspraktyk. Totale Bruto Ontvangste: 1952 ± £2,300, 1953 ± £2,430. Prys vir klandisiewaarde £750 en vir medisyne, meubels en instrumente £250.
(1457) Goed gevestigde Westelike Provinsie praktyk. Netto inkomste oorskry £3,000 per jaar. Huis beskikbaar. Verband kan gereël word. Volle besonderhede op aanvraag.
(1530) Karoodorp. Eenmanspraktyk sonder opposisie. Gemiddelde inkomste £2,000 p.j. Premie verlang £700. Huis te huur teen £8 p.m. D.S. aanstelling.
(1633) Excellent opportunity to acquire practice and home in very pleasant residential area within 17 miles of Cape Town. Suitable for English or Afrikaans speaking practitioner. Full details on application.
(1655) Cape Town, Southern Suburb. Good branch practice. Income 1953 £1,500. Premium of £750 includes fittings, furniture in rooms. Surgery and 2 waiting rooms available on very satisfactory terms. Definite scope for expansion.
(1653) Noord-Kaapland. Vooruitstrewende woldistrik. Gemiddelde ontvangste per jaar £4,150. D.S. aanstelling. Koopprys £2,000 sluit ook al die geneesmiddels in. GEEN OPPOSISIE NIE. Huis te koop.
(1657) Oostelike Provinsie. Aangename plattelandse hospitaaldorp. Maandelikse inkomste ongeveer £180 p.m. Huis en spreekkamers beskikbaar teen billike huurgeld. Prys £750 sluit goeie voorraad geneesmiddels in. Terme in afbetaling kan gereël word. Goeie geleentheid vir beginner.

ROOMS AVAILABLE TO SHARE

(1422) Cape Town. Waiting room and examination room available in St. George's Street building. (Quote also 1579 and 1618).

ASSISTENTE/PLAASVERVANGERS VERLANG
ASSISTANTS/LOCUMS REQUIRED

(1554) S.W.A. Assistant urgently required with view to partnership. Salary £80 per month plus board and lodging at hotel and car allowance. Plus equivalent 1st class return rail fare. Scope for surgery.
(1553) Transkei. Assistant as soon as possible for 6 or 12 months. Salary £80 p.m. Car not essential.
(1427) Natal. Assistant as soon as possible. Salary etc. to be arranged.
(1564) Cape Town suburban practice. Locum/Assistant required. Salary to be arranged also period of service.
(1576) East Griqualand partnership practice. Locum for June and July. Salary offered £3 3s. 0d. p.d. plus all found. Car could be provided, but if own car is used, allowance will be paid. 1st class return rail fare will be paid or equivalent.
(1639) S.W.A. Plaasvervanger vir minstens een maand so gou moontlik. Salaris £3 p.d. en losies, 1s. per myl vir gebruik van eie kar.
(1638) Boland hospital town. Assistant immediately for 3 months with view to partnership. Surgical knowledge essential.
(1651) Western Province. Gentile Assistant for 6 months with view to partnership. Preferably married man.
(1650) Cape Town suburb. Locum from ± 18 June for 3 weeks. Own car desirable but not essential. Partnership practice.

* * *

JOHANNESBURG

Medical House, 5 Esselen Street, Telephone 44-9134-5, 44-0817
Mediese Huis, Esselenstraat 5, Telefone 44-9134-5, 44-0817

ASSISTANTS/LOCUMS REQUIRED
ASSISTENTE/PLAASVERVANGERS VERLANG

(534) Vrystaat. Plaasvervanger vir Junie. Eie motor 'n vereiste. Salaris om gereël te word.
(540) Near Johannesburg. Locum for June and July. Terms: £3 3s. per day and all found.
(552) Wes-Rand. Plaasvervanger vir Julie. Terme: £3 3s. per dag, £10 p.m. kartoelae, vry petrol en olie en losies. Huis beskikbaar vir getroude persoon.
(554) Transvaal hospital town. Assistant required—view to partnership. Preferably man with surgical experience.
(557) Southern Rhodesia. Locum for seven weeks as from 20 May. Partnership practice. Salary £3 3s. per day and all found. A small car available.
(561) Wes-Transvaal. Assistent om so spoedig moontlik te begin. Salaris £100 p.m. plus vry petrol en olie.
(562) Johannesburg. Locum as from 26 June till 16 July.
(565) Mine locum for June. Salary £3 3s. per day plus transport allowance. Single quarters.
(567) Wes-Transvaal Plaasvervanger vir Julie. Salaris £2 12s. 6d. per dag, plus vry losies en 'n kar word verskaf.
(568) Vrystaat. Plaasvervanger vir Junie. £2 12s. 6d. per dag, plus £10 p.m. kartoelae en alles vry.

PART-TIME WORK REQUIRED

Experienced doctor available for part-time work in Johannesburg. Available 4 afternoons a week, every weekend and most nights.

PRAKTYKE TE KOOP

(Pr/S118) Vrystaatse hospitaaldorp. Uitstekende geleentheid om 'n ou-gevestigde praktyk te verkry vir die lae premie van £700. Instrumente, toerusting en meubels £300. Terme sal oorweeg word.
(Pr/S119) Randse hospitaaldorp. Goedgevestigde praktyk. Geen snykunde word gedoen nie. Jaarlikse inkomste oorskrei £3,000. Premie kan as volg afbetaal word: £250 kontant en maandelikse paaiemente om gereël te word, maar nie minder dan £30 p.m.

FOR SALE

(I/060) Siemens Heliosphere X-Ray. Perfect condition. Very little used. What offers?

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DURBAN

112 Medical Centre, Field Street, Telephone 2-4049

PRACTICE FOR SALE

(PD24) Natal South Coast. Practice suitable for doctor who does not want full-time work. £250 for drugs, dressings instruments, etc. No charge for goodwill. Small house on ½ morgen, £1,600. Immediate occupation.
(PD25) Durban. House and practice available, suitable for a surgeon. Details on application.

LOCUMS URGENTLY REQUIRED

(LM3) Locum required, Natal South Coast, as soon as possible, for approximately one month. £85 all found. Mixed general practice, about 80% non-European. Not much travelling, very few night calls and only minor surgery.
(LM4) Wartburg, Natal. Locum for three weeks, as soon as possible. £2 12s. 6d. per day, all found, plus car allowance. Mixed country practice.

LOCUMS REQUIRED
ASSISTANTS/LOCUMS REQUIRED

(LM5) Camperdown, Natal. Locum from about 25 March for one month. £2 12s. 6d. per day, all found. Car provided, if necessary.
(LM5) Pietermaritzburg. Locum from about 27 March until 16 April. £2 12s. 6d. per day, all found. Car allowance.
(LM6) Partnership practice in hospital town, Zululand. Locum required for month of May. £2 12s. 6d. per day, all found, plus car allowance.
(LM7) Zululand. Locum from about 15 May for six weeks. £3 5s. per day, free board and lodging, and £10 per month car allowance.
(LM8) Natal country partnership practice. Locum required from approximately 26 June to 26 July. £2 12s. 6d. per day, all found, plus travelling allowance.
(LM9) Natal South Coast. Locum required for July. £3 3s. per day, all found. Must have own car. General mixed country practice.

ASSISTANTS REQUIRED

(AM1) Assistant required in general mixed practice near Durban, as soon as possible, must be experienced and fully bilingual. House available. Possibility of partnership. Full details on request.

(AM2) Assistant required for trial period. If suitable, partnership will be offered. General practice in select area approximately 20 miles from Durban.

ASSISTANTSHIP REQUIRED

(AR1) Young married doctor, qualified 8 years, experience in obstetrics and gynaecology and surgery, seeks assistantship with view to partnership in general practice.

O.F.S. Provincial Administration

VOORTREKKER HOSPITAL
KROONSTAD

VACANCIES FOR INTERNS

Applications are invited to fill existing vacancies for the posts of Interns and House Surgeons.

Salary scale Interns: £240 p.a. plus c.o.l. allowance.

Salary scale House Surgeons: £300 p.a. plus c.o.l. and free board and lodging.

F. A. van Coller
Medical Superintendent

Kroonstad
30/3/54 (A43299)

O.V.S. Provinsiale Administrasie

VOORTREKKER-HOSPITAAL
KROONSTAD

VAKATURES—INTERNS

Aansoeke word ingewag vir genoemde vakatures vir die pos Intern en Huisdokters.

Salarisskaal Intern: £240 p.j. plus lewenskoste.

Salarisskaal Huisdokters: £300 p.j. plus lewenskoste, plus vry inwoning.

F. A. van Coller
Geneesheer-Direkteur

Kroonstad
30/3/54 (A43299)

Municipality of Calitzdorp

VACANCY: PART-TIME MEDICAL OFFICER OF HEALTH

Applications are invited for the above vacancy at a salary of £96 per annum.

The successful applicant will be required to enter into a contract with the Council, supervise the general health position of the Municipal area, visit the T.B. Hospital, sanitary and other public services once a week, compile monthly and annual reports to the Council and Department of Health respectively and carry out such other duties as the Council may assign to him from time to time. In addition to the above his duties shall include the treatment of patients at the T.B. Hospital (which includes observation, blood and sputum tests) at a fee of 5s. per injection per patient.

Applications, marked 'Medical Officer of Health' must reach the undersigned not later than 18 May 1954.

J. Beukes
Town Clerk

Municipal Offices
Calitzdorp
5 April 1954

ASSISTANTSHIP REQUIRED

Assistantship with possible view to partnership required by young doctor, preferably in the Cape. Experience in hospital and general practice. Reply to 'A.V.B.', P.O. Box 643, Cape Town.

Conradie Hospital, Pinelands

VACANCY: HONORARY THORACIC SURGEON

Applications are invited from Registered Medical Practitioners who are under the age of sixty years for appointment to the post of Honorary Thoracic Surgeon on the Staff of the Conradie Hospital, Pinelands.

The appointment will be for the period ending 31 December 1956, and in all other respects is subject to the Hospitals Ordinance No. 18 of 1946 (Cape) as amended, and to the Regulations framed thereunder.

Applications, stating age, qualifications and experience, should be addressed to the Medical Superintendent, Conradie Hospital Pinelands, to reach his office not later than noon on Saturday, 15 May 1954.

2016

Vakature: Ere-Borschirurg

Aansoeke word ingewag van Geregistreerde Geneeshere onder die ouderdomsgrens van sestig jaar vir aanstelling in die betrekking van Ere-Borschirurg by die Conradie-Hospitaal, Pinelands.

Die aanstelling sal vir die tydperk eindigende 31 Desember 1956 geldig wees, en sal in alle ander opsigte geskied ingevolge die Kaapse Ordonnansie op Hospitale, nr. 18 van 1946, soos gewysig, en die regulasies daarvolgens opgestel.

Aansoeke, waarin ouderdom, kwalifikasies en ondervinding gemeld word, moet aan die Mediese Superintendent, Conradie-Hospitaal, Pinelands gerig word om hom te bereik nie later nie as middag op Saterdag 15 Mei 1954.

2016

City of Salisbury

VACANCY: MEDICAL OFFICER CLINICAL (FEMALE)

Applications for the following post should be addressed to the Medical Officer of Health, P.O. Box 596, Salisbury, and arrive not later than 15 May 1954.

Medical Officer Clinical (Female): £880x£50—£1,330 per annum.

Duties of the post include the treatment of Infectious Diseases in the Council's hospitals, the medical examination of female Africans, the carrying out of work under the Maternity Child Welfare, Venereal Diseases and General Dispensary Schemes, and such other work as may be required. The candidate appointed must devote her whole time and attention to the service of the Council, and perform all directions of the Council and the Medical Officer of Health, and his appointed Deputy.

The successful candidate will be required to provide her own transport; an allowance at present fixed at 9d. per mile is payable on all official mileage.

Successful applicant will be required to submit a satisfactory medical certificate and serve a probationary period of six months, and if thereafter confirmed in their appointment to join the Southern Rhodesia Local Authorities Joint Pension and Widows' and Orphans' Funds. No allowances are payable, and entry will be at the minimum of the respective grade. Applicants must submit copies of testimonials, state age, place of birth, nationality, marital state, qualifications and experience, and earliest date duties can be commenced.

8586

PRACTICE FOR SALE

For sale in Southern Rhodesia a small specialist practice, capable of expansion in any direction. Equipped surgery available from 1 November. Accommodation also available. Incumbent retiring. Apply 'A.U.Z.', P.O. Box 643, Cape Town.

TO LET

Suite of three professional rooms near hospital in Kotze Street, Johannesburg. Phone 34-3114.

Provinsiale Administrasie van die Kaap die Goeie Hoop

HOSPITAALDEPARTEMENT

SHARLEY CRIBB-VERPLEGINGSKOLLEGE, PORT ELIZABETH: LESINGS VIR LEERLINGVERPLEEGSTERS

1. Aansoeke word ingewag van geregistreerde geneeshere om lesings aan leerlingverpleegsters aan die Sharley Cribb-verplegingskollege, Port Elizabeth, te gee in die volgende vakke:
   Anatomie: Afrikaans medium; 25 lesings per kursus; 3 kursusse per jaar.
   Fisiologie: Afrikaans medium; 25 lesings per kursus; 3 kursusse per jaar.
   Mediese Verpleging: Afrikaans medium; 40 lesings per kursus; 3 kursusse per jaar.
2. Lesings moet gegee word tussen die ure 8.45 vm. tot 12.45 nm. Elke lesing moet een uur duur.
3. Lektor sal besoldig word teen £1 1s. per lesing en 1s. vir elke vraestel wat nagesien word.
4. Nadere besonderhede is verkrygbaar by die Prinsipale, Sharley Cribb-verplegingskollege, Port Elizabeth.
5. Aansoek moet gedoen word op die voorgeskrewe vorm (Staf 23), wat verkrygbaar is by die Direkteur van Hospitaaldienste, Posbus 2060, Kaapstad, of by die Mediese Superintendent van enige provinsiale hospitaal of by die Sekretaris van enige Skoolraad in die Kaapprovinsie.
6. Aansoeke moet aan die Direkteur van Hospitaaldienste, Posbus 2060, Kaapstad, gerig word, en moet hom nie later as 28 Mei 1954 bereik nie.

M127105

Vakature: Besoekende Radioloog

Aansoek op vorm Z.83 verkrygbaar van Magistraatskantore word gevra vir 'n pos van Besoekende Radioloog by die Provinsiale Hospitaal, Bethlehem, op die basis van twee sessies per week teen besoldiging van £205 per jaar per sessie van vier ure: d.w.s. £410 per jaar, plus reiskoste teen regeringstarief indien van 'n ander sentrum gereis moet word. Die vergoeding is om alle pasiënte te ondersoek.

Kandidate moet tweetalige Suid-Afrikaanse Burgers wees en as Radioloog by die Suid-Afrikaanse Mediese en Tandheelkundige Raad geregistreer wees.

Applikante moet meld watter dae, uitgesonderd Sondae en vakansiedae besoeke afgelê sal word.

Applikasies met bewys van Registrasie en gemerk 'Radioloog', met melding van vroegste datum waarop diens aanvaar kan word, moet die Sekretaris van die Hospitaal nie later as 20 Mei 1954 bereik nie.

A688965

Universiteit van Pretoria

VAKATURES: DEPARTEMENT VAN FISIOLOGIE

Aansoeke om die volgende betrekkings in bogenoemde departement word ingewag:

(*a*) *Senior lektoraat:* salarisskaal £1,050x50 : 1,400.
(*b*) *Lektoraat:* salarisskaal £800x50 : 1,050x50 : 1,100.

Applikante hoef nie noodwendig geneeshere te wees nie.

Lewenskoste wat tans £234 per jaar vir getroude persone bedra is van toepassing en die aanvangsalarisse sal vasgestel word volgens kwalifikasies en ervaring. Dienste moet op 1 Augustus 1954 aanvaar word.

Aansoeke vergesel van onlangse getuigskrifte en besonderhede omtrent kwalifikasies, ervaring, huwelikstaat en huidige salarisinkomste plus toelaes moet gerig word aan die Registrateur, Universiteit van Pretoria, en moet hom voor of op 29 Mei 1954 bereik.

Martin Smuts
Registrateur

Provincial Administration of the Cape of Good Hope

HOSPITALS DEPARTMENT

SHARLEY CRIBB NURSING COLLEGE, PORT ELIZABETH: LECTURES TO STUDENT NURSES

1. Applications are invited from registered medical practitioners to lecture to student nurses at the Sharley Cribb Nursing College, Port Elizabeth, in the following subjects:
   Anatomy: Afrikaans medium; 25 lectures per course; 3 courses per annum.
   Physiology: Afrikaans medium; 25 lectures per course; 3 courses per annum.
   Medical Nursing: Afrikaans medium; 40 lectures per course; 3 courses per annum.
2. Lectures to be given between the hours of 8.45 a.m. to 12.45 p.m. Each lecture to be of one hour's duration.
3. Lecturer will be remunerated at the rate of £1 1s. per lecture, and 1s. per examination paper corrected.
4. Further particulars are obtainable from the Principal, Sharley Cribb Nursing College, Port Elizabeth.
5. Application must be made on the prescribed form (Staff 23), which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or from the Medical Superintendent of any Provincial Hospital, or Secretary of any School Board in the Cape Province.
6. Applications must be addressed to the Director of Hospital Services, P.O. Box 2060, Cape Town, and must reach him not later than 28 May 1954.

M127105

LOCUM WANTED

Northern Cape City. Locum wanted from 1 September to 30 November 1954. £85 per month, all found. Must have own car: expenses paid. Write 'A.V.D.', P.O. Box 643, Cape Town.

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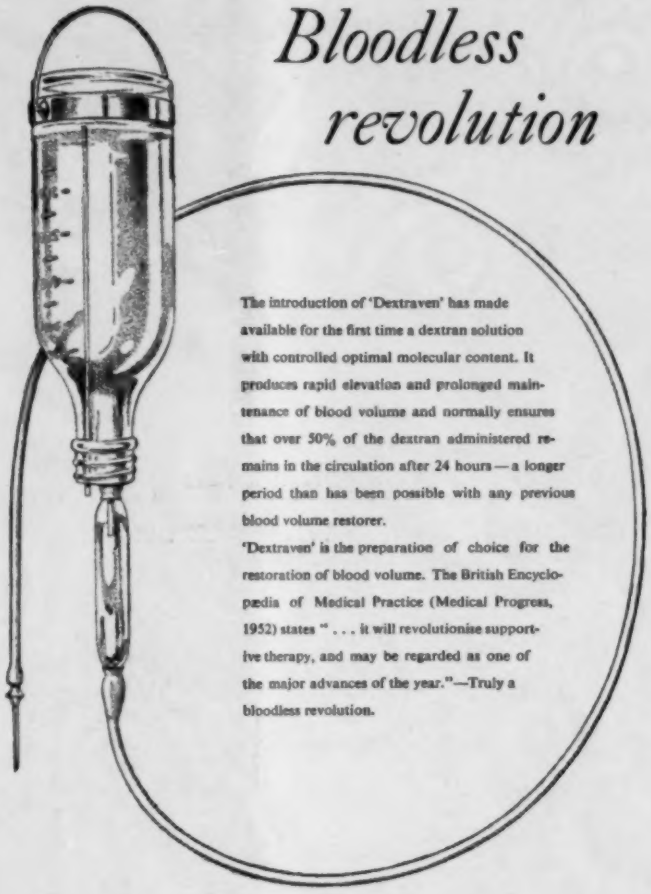
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